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RESEARCH MEMORANDUM

WIND-TUNNEL INVESTIGATION OF THE EFFECT OF ASPECT RATIO
AND CHORDWISE LOCATION ON EFFECTIVENESS OF PLAIN
SPOILERS ON THIN UNTAPERED WINGS
AT TRANSONIC SPEEDS

By Alexander D. Hammond

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of the aeronautical laws. Title 18, U.S.C.

**NATIONAL ADVISORY COMMITTEE
FOR AERONAUTICS**

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WIND-TUNNEL INVESTIGATION OF THE EFFECT OF ASPECT RATIO
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SUMMARY

A wind-tunnel investigation has been made in the Langley high-speed 7- by 10-foot wind tunnel by use of the transonic-bump technique to study the effectiveness of spoiler-type controls on 9 unswept untapered wings. Full-span spoilers, projected to 7.5-percent wing chord along the 40-, 60-, 80-, and 100-percent wing chord lines, were tested on wings of aspect ratio 1 to 6 at Mach numbers from 0.6 to 1.10. Most of the data are presented without analysis.

INTRODUCTION

Design of spoiler-type controls at transonic speeds is hampered by the lack of a satisfactory theoretical approach and the lack of systematic data on the effects of spoiler chordwise location and wing aspect ratio. There are considerable published data on spoilers (refs. 1 to 3) but for the most part there is no systematic variation of variables on a given wing configuration.

The present paper presents the results of a wind-tunnel investigation to determine spoiler effectiveness on 9 small-scale rectangular semispan wings. The transonic speeds were obtained by using the transonic-bump technique in the Langley high-speed 7- by 10-foot wind tunnel. The variables investigated were wing thickness (4 and 6 percent), wing aspect ratio (aspect ratios from 1 to 6), and spoiler chordwise location (spoilers located from 0.4 to 1.0 wing chord).

In order to expedite the publication of the results, no detailed analysis or discussion of the data will be made. All the data are

presented in tabulated form and, in addition, some data showing significant trends are presented in graphic form.

SYMBOLS

C_L	lift coefficient, $\frac{\text{Twice semispan lift}}{qS}$
C_D	drag coefficient, $\frac{\text{Twice semispan drag}}{qS}$
C_m	pitching-moment coefficient about 0.25c, $\frac{\text{Twice semispan pitching moment}}{qSc}$
C_l	rolling-moment coefficient, $\frac{\text{Semispan rolling moment}}{qSb}$
C_n	yawing-moment coefficient, $\frac{\text{Semispan yawing moment}}{qSb}$
b	wing span, ft
c	wing chord, ft
x_s	spoiler location from leading edge, ft
S	wing area, sq ft
t	wing thickness, ft
A	wing aspect ratio, b^2/S
q	free-stream dynamic pressure, $\frac{1}{2}\rho V^2$, lb/sq ft
V	free-stream velocity, ft/sec
ρ	free-stream density, slugs/cu ft
R	Reynolds number based on wing chord
M	free-stream Mach number
M_l	local Mach number

α angle of attack, deg

δ_s spoiler projection above wing surface, fraction of wing chord

ΔC_L , ΔC_m , ΔC_D change in coefficient due to spoiler deflection,
difference between wing with spoiler and the plain wing

$(\Delta C_N)_{cp}$ center of pressure of incremental normal-force coeffi-
cient due to spoiler projection

MODELS

The geometric characteristics of the models used in the investigation are given in figure 1. The models were machined from solid steel to either NACA 65A004 or NACA 65A006 airfoil sections. The basic models had no twist or camber and had a taper ratio of 1. The aspect ratio was varied by cutting the wings at the appropriate spanwise station normal to the chord plane.

Flap-type spoilers (simulated by a wedge) (fig. 1) were attached to the upper surface of the wings at chordwise stations of $0.4c$, $0.6c$, $0.8c$, $1.0c$, and extended from the wing root to the wing tip. The spoiler projection δ_s was $0.075c$ for all the wings.

TESTS

The tests were made by using the transonic-bump technique in the Langley high-speed 7- by 10-foot tunnel. The models were attached to a five-component electrical strain-gage balance beneath the bump surface. The tests were made over a Mach number range from 0.60 to 1.10 at Reynolds numbers varying from 0.5×10^6 to 1.5×10^6 (fig. 2). The variation of the local Mach number over the bump in the vicinity of the model is shown in figure 3.

The test angles of attack varied from -10° to 25° whenever the loads encountered did not exceed the design limit of the balance. The aspect ratio varied from 2 to 6 on the 6-percent-thick wing and from 1 to 4 on the 4-percent-thick wing.

CORRECTIONS

The data have not been corrected for jet-boundary effects on blocking since the models were sufficiently small with respect to tunnel boundaries as to make the corrections negligible. No corrections were applied to account for flap deflection under load, since calculations had indicated that these were also negligible. The roll and yaw data presented represent the rolling- and yawing-moment coefficients resulting from deflection of the control on one wing. Since no reflection-plane corrections have been applied to the data, they represent symmetrically deflected controls and should be reduced if applied to antisymmetric deflection. The magnitude of the corrections (reflection plane) at $M = 0$ obtained from references 4 and 5 is given in figure 4. The variation of the reflection-plane correction with Mach number has not been established in the transonic speed range but does decrease to 0 at supersonic speeds.

RESULTS AND DISCUSSION

The force and moment data obtained in this investigation are presented in tabular form in tables 1 to 6.

The variation of ΔC_L , ΔC_D , ΔC_m , and $(\Delta C_N)_{cp}$ with aspect ratio is shown in figure 5 at zero angle of attack at $M = 0.8$ and $M = 1.1$. The variation of ΔC_L , ΔC_D , ΔC_m , and $(\Delta C_N)_{cp}$ with angle of attack is given in figure 6 for the aspect-ratio-4, 6-percent-thick wing at $M = 0.8$ and $M = 1.1$. The variation of ΔC_L , ΔC_D , ΔC_m , and $(\Delta C_N)_{cp}$ with Mach number is given in figure 7 at zero angle of attack for the aspect ratio 4, 4-percent- and 6-percent-thick wings.

The graphical presentation of some of the data (figs. 5 to 7) is presented to give a pictorial description of the typical variation of ΔC_L , ΔC_D , ΔC_m , and $(\Delta C_N)_{cp}$ with the several test variables. If a detailed analysis is desired, recourse should be made to the tabulated data. (See tables 1 to 6.)

The loss in lift effectiveness of the spoiler at any chordwise location when the angle of attack is greater than about 10° at subsonic speed (fig. 6(a)) is typical of this type of spoiler. It has been shown (ref. 1) that this loss in effectiveness can be alleviated by putting a slot through the wing behind the spoiler when the spoiler is deflected. The addition of the slot should be considered whenever a spoiler installation on thin wings is required to operate at high angles of attack.

It should be pointed out that these data are for only one value of spoiler projection and, although they are useful in determining the effects of the several variables, they are not necessarily applicable to the design of a control surface that uses small deflections (ref. 6).

Langley Aeronautical Laboratory,
National Advisory Committee for Aeronautics,
Langley Field, Va., May 29, 1956.

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TABLE¹ - THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 1 MODEL $\frac{t}{c} = 0.04$ $\frac{x_b}{c} = \text{NONE}$

α , deg	c_L	c_D	c_H	c_l	c_n	α , deg	c_L	c_D	c_H	c_l	c_n
$H = 0.60$											
-10	-.3241	.0235	-.0034	-.0409	.0101	-10	-.3379	.0703	-.0225	-.0427	.0161
-7	-.1958	.0183	.0011	-.0277	.0085	-7	-.2072	.0545	-.0236	-.0262	.0125
-5	-.1392	.0131	-.0356	-.0204	.0079	-5	-.1258	.0498	-.0221	-.0165	.0097
-3	-.0761	.0183	-.0271	-.0132	.0073	-3	-.0666	.0474	-.0155	-.0082	.0079
-2	-.0544	.0191	-.0229	-.0092	.0073	-2	-.0345	.0486	-.0056	-.0052	.0068
-1	-.0218	.0257	-.0107	-.0059	.0063	-1	-.0025	.0511	.0019	-.0015	.0068
0	.0087	.0322	-.0124	-.0013	.0054	0	.0222	.0511	.0066	.0023	.0054
1	.0326	.0387	-.0126	.0020	.0047	1	.0469	.0533	.0072	.0052	.0057
2	.0609	.0448	-.0054	.0053	.0044	2	.0789	.0570	.0169	.0090	.0061
3	.0914	.0505	-.0049	.0086	.0044	3	.1134	.0631	.0224	.0127	.0075
5	.1566	.0600	-.0048	.0165	.0057	5	.1800	.0740	.0214	.0217	.0075
7	.2349	.0822	-.0072	.0264	.0076	7	.2590	.0959	.0246	.0314	.0125
10	.3589	.1335	-.0033	.0416	.0158	10	.4094	.1480	.0104	.0509	.0190
15	.5699	.2567	-.0308	.0699	.0288	15	.6486	.2523	-.0273	.0793	.0312
20	.7939	.4320	-.0960	.0964	.0487	20	.8755	.3978	-.0921	.1085	.0509
25	.9092	.5821	-.1502	.1115	.0642	25	.9791	.5362	-.1353	.1197	.0670
$H = 0.80$											
-10	-.3542	.0487	-.0237	-.0425	.0111	-10	-.3513	.0894	-.0149	-.0437	.0151
-7	-.2258	.0354	-.0274	-.0282	.0092	-7	-.2075	.0637	-.0242	-.0272	.0116
-5	-.1446	.0283	-.0226	-.0188	.0079	-5	-.1297	.0580	-.0264	-.0172	.0093
-3	-.0812	.0269	-.0180	-.0107	.0069	-3	-.0637	.0545	-.0166	-.0086	.0072
-2	-.0502	.0283	-.0055	-.0076	.0064	-2	-.0330	.0545	-.0131	-.0050	.0062
-1	-.0192	.0304	-.0053	-.0040	.0058	-1	-.0024	.0556	-.0012	-.0014	.0058
0	.0103	.0342	-.0023	.0000	.0047	0	.0236	.0568	.0022	.0014	.0048
1	.0369	.0363	-.0090	.0031	.0043	1	.0566	.0580	.0051	.0057	.0048
2	.0635	.0378	-.0063	.0072	.0037	2	.0872	.0637	.0216	.0086	.0065
3	.1004	.0437	-.0131	.0112	.0032	3	.1226	.0648	.0250	.0129	.0075
5	.1668	.0596	-.0212	.0193	.0043	5	.1910	.0823	.0227	.0215	.0096
7	.2479	.0776	-.0177	.0291	.0084	7	.2853	.1066	.0225	.0329	.0137
10	.3763	.1263	-.0160	.0457	.0156	10	.4433	.1518	.0032	.0536	.0206
15	.5889	.2518	-.0198	.0743	.0283	15	.7192	.2655	-.0490	.0880	.0353
20	.8117	.3949	-.0959	.0990	.0466	20	.9432	.4164	-.1020	.1180	.0559
25	.8767	.4965	-.1369	.1075	.0594	25	1.1011	.6076	-.1582	.1373	.0795
$H = 0.85$											
-10	-.3624	.0340	-.0271	-.0436	.0124	-10	-.3725	.1066	.0017	-.0473	.0118
-7	-.2310	.0205	-.0300	-.0281	.0094	-7	-.2258	.0745	-.0150	-.0288	.0082
-5	-.1480	.0149	-.0202	-.0176	.0066	-5	-.1355	.0632	-.0195	-.0185	.0056
-3	-.0871	.0116	-.0182	-.0105	.0056	-3	-.0722	.0578	-.0139	-.0103	.0040
-2	-.0539	.0136	-.0132	-.0067	.0048	-2	-.0361	.0555	-.0107	-.0062	.0033
-1	-.0207	.0149	-.0032	-.0034	.0048	0	-.0000	.0555	-.0029	-.0021	.0030
0	.0041	.0169	-.0017	.0004	.0044	0	.0271	.0578	-.0005	.0021	.0023
1	.0318	.0205	-.0072	.0042	.0046	1	.0655	.0632	.0068	.0062	.0026
2	.0692	.0257	-.0150	.0075	.0028	2	.1016	.0632	.0099	.0103	.0040
3	.0996	.0271	-.0149	.0118	.0028	3	.1355	.0689	.0152	.0144	.0059
5	.1729	.0421	-.0191	.0197	.0044	5	.2213	.0856	.0132	.0240	.0089
7	.2490	.0611	-.0262	.0302	.0092	7	.3116	.1043	.0037	.0356	.0131
10	.3942	.1137	-.0185	.0491	.0165	10	.4628	.1488	-.0159	.0548	.0197
15	.6086	.2327	-.0129	.0772	.0284	15	.7247	.2709	.0599	.0884	.0325
20	.8244	.3809	-.0989	.1003	.0456	20	.9482	.4296	-.1097	.1192	.0532
25	.8963	.4980	-.1409	.1095	.0589	25	1.1424	.6263	-.1627	.1438	.0765
$H = 0.90$											
-10	-.3258	.0649	-.0271	-.0416	.0162	-10	-.3724	.0793	-.0013	-.0472	.0044
-7	-.1965	.0572	-.0218	-.0259	.0128	-7	-.2330	.0579	-.0126	-.0297	.0022
-5	-.1267	.0546	-.0209	-.0165	.0102	-5	-.1503	.0514	-.0172	-.0192	-.0003
-3	-.0595	.0535	-.0123	-.0094	.0083	-3	-.0740	.0470	-.0125	-.0099	-.0010
-2	-.0259	.0546	-.0034	-.0055	.0083	-2	-.0436	.0451	-.0098	-.0063	-.0022
-1	.0000	.0559	-.0041	-.0024	.0079	-1	.0000	.0579	.0003	-.0017	-.0032
0	.0233	.0572	-.0049	-.0008	.0071	0	.0283	.0470	-.0010	.0026	-.0025
1	.0491	-.0052	.0095	-.0047	.0071	1	.0501	.0579	.0023	.0059	-.0016
2	.0802	.0636	-.0165	.0079	.0071	2	.0871	.0579	.0123	.0099	-.0013
3	.1138	.0698	-.0251	.0118	.0071	3	.1263	.0579	.0143	.0139	.0016
5	.1810	.0815	-.0190	.0204	.0094	5	.2069	.0793	.0085	.0244	.0016
7	.2586	.1042	-.0266	.0314	.0139	7	.2940	.1006	.0037	.0363	.0038
10	.3957	.1539	-.0160	.0487	.0196	10	.4464	.1585	-.0129	.0545	.0111
15	.6388	.2658	-.0177	.0785	.0316	15	.7077	.2935	-.0559	.0875	.0282
20	.8379	.3944	-.0969	.1012	.0492	20	.9211	.4540	-.1152	.1173	.0497
25	.9206	.5126	-.1387	.1122	.0616	25	1.1106	.6361	-.1623	.1411	.0681
$H = 1.00$											
-10	-.3513	.0894	-.0149	-.0437	.0151	-10	-.3725	.1066	.0017	-.0473	.0118
-7	-.2075	.0637	-.0242	-.0272	.0116	-7	-.2258	.0745	-.0150	-.0288	.0082
-5	-.1297	.0580	-.0264	-.0172	.0093	-5	-.1355	.0632	-.0195	-.0185	.0056
-3	-.0637	.0545	-.0166	-.0086	.0072	-3	-.0722	.0578	-.0139	-.0103	.0040
-2	-.0330	.0545	-.0131	-.0050	.0062	-2	-.0361	.0555	-.0107	-.0062	.0033
-1	-.0024	.0556	-.0012	-.0014	.0058	-1	-.0000	.0555	-.0029	-.0021	.0030
0	.0236	.0568	.0022	.0014	.0048	0	.0271	.0578	-.0005	.0021	.0023
1	.0566	.0580	.0051	.0057	.0048	1	.0655	.0632	.0068	.0062	.0026
2	.0872	.0637	.0216	.0086	.0065	2	.1016	.0632	.0099	.0103	.0040
3	.1226	.0648	.0250	.0129	.0075	3	.1355	.0689	.0152	.0144	.0059
5	.1910	.0823	.0227	.0215	.0096	5	.2213	.0856	.0132	.0240	.0089
7	.2853	.1066	.0225	.0329	.0137	7	.3116	.1043	.0037	.0356	.0131
10	.4433	.1518	.0032	.0536	.0206	10	.4628	.1488	-.0159	.0548	.0197
15	.7192	.2655	-.0490	.0880	.0353	15	.7247	.2709	.0599	.0884	.0325
20	.9432	.4296	-.1097	.1192	.0532	20	.9482	.4296	-.1097	.1192	.0532
25	1.1011	.6076	-.1582	.1373	.0795	25	1.1424	.6263	-.1627	.1438	.0765

TABLE 1 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 1 MODEL - Continued
 $\frac{t}{c} = 0.04$ $\frac{x_0}{c} = 0.40$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$H = 0.60$											
-10	-0.3025	0.0531	-0.1145	-0.0367	0.0189	-10	-0.4132	0.3567	-0.0805	-0.0498	0.0170
-7	-0.2225	0.0531	-0.1104	-0.0275	0.0147	-7	-0.3491	0.3081	-0.0643	-0.0385	0.0124
-5	-0.1685	0.0510	-0.1122	-0.0210	0.0123	-5	-0.2714	0.2790	-0.0627	-0.0314	0.0090
-3	-0.1080	0.0510	-0.1097	-0.0144	0.0100	-3	-0.2097	0.2620	-0.0568	-0.0282	0.0057
-2	-0.0756	0.0531	-0.1036	-0.0111	0.0094	-2	-0.1887	0.2548	-0.0598	-0.0198	0.0045
-1	-0.0540	0.0488	-0.0998	-0.0079	0.0085	-1	-0.1480	0.2548	-0.0540	-0.0157	0.0032
0	-0.0216	0.0640	-0.0961	-0.0026	0.0082	0	-0.1221	0.2548	-0.0582	-0.0120	0.0027
1	0.0108	0.0678	-0.0927	0.0006	0.0078	1	-0.0888	0.2548	-0.0540	-0.0082	0.0027
2	0.0324	0.0765	-0.0985	0.0039	0.0072	2	-0.0555	0.2548	-0.0497	-0.0045	0.0022
3	0.0648	0.0851	-0.0950	0.0085	0.0069	3	-0.0222	0.2548	-0.0544	0.0004	0.0027
5	0.1102	0.0977	-0.0893	0.0144	0.0069	5	0.0493	0.2719	-0.0543	0.0097	0.0020
7	0.1642	0.1167	-0.0743	0.0216	0.0069	7	0.1160	0.2911	-0.0445	0.0172	0.0027
10	0.2852	0.1426	-0.0705	0.0347	0.0100	10	0.2640	0.3276	-0.0485	0.0337	0.0059
15	0.5077	0.2424	-0.0547	0.0623	0.0217	15	0.5428	0.4853	-0.0704	0.0655	0.0260
20	0.7022	0.3824	-0.0902	0.0905	0.0348	20	0.7796	0.7014	-0.1190	0.0966	0.0407
25	0.8642	0.5315	-0.1290	0.1101	0.0528						
$H = 0.80$											
-10	-0.3606	0.1023	-0.1095	-0.0427	0.0158	-10	-0.3657	0.1996	-0.0840	-0.0447	0.0163
-7	-0.2859	0.0968	-0.1005	-0.0334	0.0154	-7	-0.2713	0.1647	-0.0842	-0.0326	0.0120
-5	-0.2258	0.0880	-0.0919	-0.0262	0.0107	-5	-0.2124	0.1508	-0.0841	-0.0240	0.0084
-3	-0.1730	0.0865	-0.0895	-0.0187	0.0085	-3	-0.1416	0.1439	-0.0770	-0.0154	0.0057
-2	-0.1407	0.0865	-0.0816	-0.0151	0.0074	-2	-0.1180	0.1392	-0.0737	-0.0122	0.0045
-1	-0.1143	0.0865	-0.0805	-0.0120	0.0064	-1	-0.0920	0.1392	-0.0677	-0.0079	0.0034
0	-0.0850	0.0894	-0.0801	-0.0085	0.0053	0	-0.0472	0.1416	-0.0795	-0.0032	0.0031
1	-0.0513	0.0938	-0.0711	-0.0049	0.0051	1	-0.0260	0.1392	-0.0757	0.0000	0.0031
2	-0.0293	0.0938	-0.0705	-0.0009	0.0043	2	-0.0024	0.1416	-0.0703	0.0039	0.0029
3	0.0000	0.0994	-0.0662	0.0036	0.0058	3	0.0472	0.1463	-0.0724	0.0093	0.0029
5	0.0689	0.1097	-0.0585	0.0116	0.0052	5	0.1180	0.1508	-0.0718	0.0183	0.0031
7	0.1393	0.1211	-0.0464	0.0187	0.0045	7	0.1888	0.1626	-0.0649	0.0261	0.0048
10	0.2785	0.1443	-0.0506	0.0358	0.0085	10	0.3057	0.1810	-0.0540	0.0394	0.0091
15	0.5131	0.2378	-0.0420	0.0631	0.0230	15	0.5899	0.2577	-0.0678	0.0712	0.0290
20	0.7183	0.3562	-0.0768	0.0916	0.0358	20	0.8140	0.3829	-0.1000	0.0999	0.0461
25	0.8650	0.4685	-0.1117	0.1081	0.0526						
$H = 0.85$											
-10	-0.3888	0.1311	-0.1075	-0.0459	0.0164	-10	-0.3409	0.1998	-0.0791	-0.0432	0.0110
-7	-0.3091	0.1149	-0.0983	-0.0350	0.0180	-7	-0.2484	0.1677	-0.0924	-0.0295	0.0069
-5	-0.2404	0.1014	-0.0861	-0.0275	0.0100	-5	-0.1580	0.1556	-0.0946	-0.0188	0.0030
-3	-0.1827	0.1014	-0.0747	-0.0200	0.0076	-3	-0.0993	0.1465	-0.0919	-0.0093	0.0008
-2	-0.1594	0.1000	-0.0809	-0.0167	0.0064	-2	-0.0406	0.1443	-0.1290	-0.0048	0.0036
-1	-0.1305	0.1000	-0.0757	-0.0133	0.0060	-1	-0.0226	0.1499	-0.0873	-0.0003	0.0013
0	-0.0962	0.1028	-0.0710	-0.0096	0.0044	0	-0.0023	0.1522	-0.0911	0.0045	0.0025
1	-0.0687	0.1014	-0.0668	-0.0058	0.0040	1	0.0294	0.1556	-0.0911	0.0079	0.0025
2	-0.0385	0.1028	-0.0635	-0.0021	0.0040	2	0.0677	0.1610	-0.0839	0.0130	0.0028
3	-0.0069	0.1080	-0.0605	0.0025	0.0038	3	0.1016	0.1666	-0.0869	0.0175	0.0031
5	0.0550	0.1190	-0.0543	0.0109	0.0024	5	0.1693	0.1788	-0.0866	0.0264	0.0008
7	0.1237	0.1270	-0.0498	0.0183	0.0030	7	0.2371	0.1910	-0.0771	0.0334	0.0030
10	0.2679	0.1487	-0.0436	0.0338	0.0080	10	0.3499	0.2109	-0.0672	0.0466	0.0079
15	0.5180	0.2418	-0.0457	0.0646	0.0244	15	0.5938	0.2831	-0.0805	0.0747	0.0284
20	0.7420	0.3446	-0.0784	0.0934	0.0390	20	0.8354	0.4163	-0.1226	0.1058	0.0463
25	0.8794	0.4663	-0.1080	0.1096	0.0565	25	1.0273	0.5886	-0.1608	0.1298	0.0668
$H = 0.90$											
-10	-0.4086	0.1526	-0.1001	-0.0487	0.0164	-10	-0.3484	0.1982	-0.0772	-0.0424	0.0098
-7	-0.3297	0.1360	-0.0915	-0.0388	0.0145	-7	-0.2287	0.1725	-0.0795	-0.0281	0.0055
-5	-0.2586	0.1208	-0.0867	-0.0302	0.0090	-5	-0.1633	0.1607	-0.0943	-0.0172	0.0087
-3	-0.2082	0.1146	-0.0752	-0.0224	0.0066	-3	-0.0980	0.1607	-0.0848	-0.0082	0.0122
-2	-0.1746	0.1120	-0.0698	-0.0180	0.0053	-2	-0.0653	0.1574	-0.0877	-0.0040	0.0154
-1	-0.1358	0.1146	-0.0656	-0.0141	0.0047	-1	-0.0218	0.1629	-0.0781	0.0003	0.0168
0	-0.1099	0.1146	-0.0690	-0.0106	0.0037	0	0.0000	0.1659	-0.0813	0.0050	0.0168
1	-0.0776	0.1120	-0.0689	-0.0067	0.0037	1	0.0261	0.1714	-0.0795	0.0093	0.0154
2	-0.0440	0.1146	-0.0615	-0.0027	0.0037	2	0.0457	0.1714	-0.0882	0.0142	0.0166
3	-0.0155	0.1169	-0.0584	0.0020	0.0037	3	0.0980	0.1820	-0.0780	0.0182	0.0134
5	0.0517	0.1272	-0.0514	0.0106	0.0019	5	0.1633	0.1982	-0.0751	0.0261	0.0103
7	0.1177	0.1334	-0.0476	0.0180	0.0023	7	0.2504	0.2056	-0.0714	0.0350	0.0100
10	0.2586	0.1565	-0.0419	0.0341	0.0053	10	0.3397	0.2249	-0.0651	0.0469	0.0016
15	0.5237	0.2415	-0.0420	0.0659	0.0233	15	0.5662	0.3105	-0.0725	0.0737	0.0169
20	0.7551	0.3454	-0.0853	0.0946	0.0391	20	0.7948	0.4294	-0.1211	0.1034	0.0370
25						25	0.9974	0.6063	-0.1897	0.1298	0.0578
$H = 1.00$											
-10	-0.4409	0.1998	-0.0791	-0.0432	0.0110						
-7	-0.3491	0.1647	-0.0842	-0.0326	0.0120						
-5	-0.2714	0.1536	-0.0848	-0.0240	0.0084						
-3	-0.2097	0.1568	-0.0568	-0.0282	0.0057						
-2	-0.1887	0.1548	-0.0598	-0.0198	0.0045						
-1	-0.1480	0.1548	-0.0540	-0.0157	0.0032						
0	-0.1221	0.1548	-0.0582	-0.0120	0.0027						
1	-0.0888	0.1548	-0.0540	-0.0082	0.0027						
2	-0.0555	0.1548	-0.0497	-0.0045	0.0022						
3	-0.0222	0.1548	-0.0544	0.0004	0.0027						
5	0.0493	0.2719	-0.0543	0.0097	0.0020						
7	0.1160	0.2911	-0.0445	0.0172	0.0027						
10	0.2640	0.3276	-0.0485	0.0337	0.0059						
15	0.5428	0.4853	-0.0704	0.0655	0.0260						
20	0.7796	0.7014	-0.1190	0.0966	0.0407						
25											
$H = 1.05$											
-10	-0.3409	0.1998	-0.0791	-0.0432	0.0110						
-7	-0.2484	0.1677	-0.0924	-0.0295	0.0069						
-5	-0.1580	0.1556	-0.0946	-0.0188	0.0030						
-3	-0.0993	0.1465	-0.0919	-0.0093	0.0008						
-2	-0.0406	0.1443	-0.1290	-0.0048	0.0036						
-1	-0										

TABLE 1 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 1 MODEL - Continued
 $\frac{x}{c} = 0.04$ $\frac{x_e}{c} = 0.60$

α , deg	C_L	C_D	C_H	C_I	C_n	α , deg	C_L	C_D	C_H	C_I	C_n
$M = 0.60$											
-10	-0.3306	0.1093	-0.0681	-0.0426	0.0132	-10	-0.4365	0.1904	-0.0540	-0.0580	0.0195
-7	-0.2464	0.0912	-0.0908	-0.0334	0.0094	-7	-0.3305	0.1613	-0.0420	-0.0441	0.0138
-5	-0.1707	0.0860	-0.0811	-0.0262	0.0066	-5	-0.2565	0.1430	-0.0380	-0.0355	0.0102
-3	-0.1188	0.0860	-0.0726	-0.0190	0.0053	-3	-0.1924	0.1297	-0.0362	-0.0269	0.0075
-2	-0.1015	0.0851	-0.0665	-0.0164	0.0044	-2	-0.1578	0.1285	-0.0385	-0.0224	0.0061
-1	-0.0799	0.0894	-0.0620	-0.0131	0.0044	-1	-0.1208	0.1273	-0.0347	-0.0176	0.0048
0	-0.0519	0.0946	-0.0569	-0.0098	0.0038	0	-0.0962	0.1226	-0.0346	-0.0146	0.0043
1	-0.0259	0.0977	-0.0513	-0.0098	0.0044	1	-0.0691	0.1226	-0.0316	-0.0105	0.0043
2	-0.0043	0.1041	-0.1134	-0.0065	0.0053	2	-0.0222	0.1226	-0.0303	-0.0056	0.0043
3	0.0281	0.1063	-0.0479	-0.0026	0.0059	3	0.074	0.1238	-0.0280	-0.0019	0.0043
5	0.0843	0.1136	-0.0407	0.0072	0.0069	5	0.0789	0.1322	-0.0260	0.0075	0.0034
7	0.1534	0.1158	-0.0356	0.0151	0.0069	7	0.1554	0.1371	-0.0229	0.0161	0.0048
10	0.2549	0.1426	-0.1111	0.0275	0.0110	10	0.3157	0.1709	-0.0313	0.0333	0.0124
15	0.4991	0.2424	-0.0479	0.0570	0.0242	15	0.5968	0.2498	-0.0485	0.0666	0.0281
20	0.7043	0.3643	-0.0779	0.0846	0.0408	20	0.8311	0.3591	-0.0800	0.0962	0.0470
25	0.9377	0.5038	-0.1151	0.1095	0.0603	25	0.9840	0.4863	-0.1318	0.1160	0.0636
$M = 0.80$											
-10	-0.3841	0.1384	-0.0656	-0.0525	0.0168	$M = 1.00$					
-7	-0.2976	0.1182	-0.0616	-0.0400	0.0130	-10	-0.4436	0.1984	-0.0231	-0.0555	0.0171
-5	-0.2302	0.1067	-0.0527	-0.0329	0.0096	-7	-0.3138	0.1578	-0.0615	-0.0383	0.0124
-3	-0.1627	0.1009	-0.0465	-0.0244	0.0068	-5	-0.2359	0.1427	-0.0595	-0.0283	0.0089
-2	-0.1349	0.0979	-0.0448	-0.0209	0.0058	-3	-0.1722	0.1416	-0.0569	-0.0204	0.0065
-1	-0.1026	0.1003	-0.0348	-0.0178	0.0051	-2	-0.1463	0.1241	-0.0510	-0.0147	0.0053
0	-0.0777	0.0994	-0.0361	-0.0142	0.0047	-1	-0.0967	0.1288	-0.0541	-0.0111	0.0050
1	-0.0469	0.0994	-0.0313	-0.0111	0.0058	0	-0.0613	0.1265	-0.0551	-0.0061	0.0043
2	-0.0147	0.0994	-0.0329	-0.0075	0.0062	1	-0.0330	0.1229	-0.0549	-0.0029	0.0048
3	0.0176	0.1023	-0.0288	-0.0027	0.0060	2	-0.0024	0.1229	-0.0468	0.0011	0.0051
5	0.0850	0.1117	-0.0204	0.0058	0.0058	3	0.0330	0.1288	-0.0498	0.0068	0.0051
7	0.1569	0.1196	-0.0214	0.0133	0.0068	5	0.1015	0.1345	-0.0451	0.0150	0.0053
10	0.2873	0.1478	-0.0224	0.0271	0.0124	7	0.1911	0.1463	-0.0428	0.0240	0.0077
15	0.5571	0.2501	-0.0392	0.0614	0.0303	10	0.3280	0.1694	-0.0464	0.0383	0.0149
20	0.7682	0.3469	-0.0801	0.0876	0.0463	15	0.5946	0.2449	-0.0589	0.0698	0.0334
25	0.9236	0.4542	-0.1118	0.1058	0.0633	20	0.8541	0.3806	-0.0968	0.1034	0.0514
$M = 0.85$											
$M = 1.05$											
-10	-0.4149	0.1514	-0.0687	-0.0550	0.0200	-10	-0.4360	0.2033	-0.0594	-0.0538	0.0102
-7	-0.3105	0.1283	-0.0478	-0.0425	0.0142	-7	-0.2982	0.1545	-0.0706	-0.0356	0.0049
-5	-0.2446	0.1149	-0.0406	-0.0342	0.0108	-5	-0.2124	0.1455	-0.0758	-0.0243	0.0016
-3	-0.1841	0.1055	-0.0411	-0.0271	0.0084	-3	-0.1333	0.1401	-0.0717	-0.0141	-0.0020
-2	-0.1539	0.1028	-0.0416	-0.0229	0.0072	-2	-0.1017	0.1356	-0.0708	-0.0103	-0.0020
-1	-0.1154	0.1028	-0.0281	-0.0188	0.0064	-1	-0.0700	0.1344	-0.0668	-0.0062	-0.0069
0	-0.0824	0.1028	-0.0258	-0.0146	0.0058	0	-0.0384	0.1344	-0.0691	-0.0024	0.0043
1	-0.0660	0.1000	-0.0151	-0.0113	0.0054	1	-0.0113	0.1378	-0.0671	0.0010	-0.0026
2	-0.0275	0.1028	-0.0233	-0.0079	0.0050	2	0.0271	0.1401	-0.0598	0.0069	-0.0010
3	0.0055	0.1041	-0.0229	-0.0029	0.0046	3	0.0655	0.1455	-0.0626	0.0120	-0.0016
5	0.0742	0.1121	-0.0209	0.0058	0.0042	5	0.1288	0.1534	-0.0579	0.0195	0.0016
7	0.1511	0.1204	-0.0124	0.0146	0.0068	7	0.2079	0.1656	-0.0572	0.0278	0.0040
10	0.2995	0.1528	-0.0252	0.0292	0.0124	10	0.3389	0.1900	-0.0547	0.0428	0.0105
15	0.5743	0.2528	-0.0434	0.0634	0.0294	15	0.5987	0.2734	-0.0661	0.0730	0.0289
20	0.7694	0.3487	-0.0832	0.0896	0.0431	20	0.8517	0.3979	-0.1004	0.1038	0.0499
25	0.9343	0.4608	-0.1225	0.1088	0.0591	25	1.0438	0.5623	-0.1591	0.1299	0.0713
$M = 0.90$											
$M = 1.10$											
-10	-0.4319	0.1691	-0.0616	-0.0565	0.0196	-10	-0.4142	0.1672	-0.0621	-0.0526	0.0022
-7	-0.3284	0.1425	-0.0436	-0.0435	0.0135	-7	-0.2899	0.1351	-0.0752	-0.0354	-0.0044
-5	-0.2379	0.1285	-0.0437	-0.0357	0.0103	-5	-0.2071	0.1201	-0.0760	-0.0245	-0.0076
-3	-0.1991	0.1169	-0.0603	-0.0279	0.0079	-3	-0.1286	0.1147	-0.0755	-0.0139	-0.0108
-2	-0.1707	0.1159	-0.0335	-0.0235	0.0068	-2	-0.0959	0.1136	-0.0751	-0.0099	-0.0105
-1	-0.1319	0.1169	-0.0250	-0.0196	0.0056	-1	-0.0610	0.1125	-0.0711	-0.0050	-0.0133
0	-0.1060	0.1133	-0.0279	-0.0157	0.0055	0	-0.0392	0.1136	-0.0722	-0.0007	-0.0136
1	-0.0724	0.1107	-0.0296	-0.0118	0.0053	1	-0.0022	0.1157	-0.0657	0.0033	-0.0130
2	-0.0362	0.1120	-0.0234	-0.0075	0.0055	2	0.0371	0.1201	-0.0621	0.0079	-0.0111
3	0.0129	0.1146	-0.0176	-0.0027	0.0051	3	0.0632	0.1242	-0.0632	0.0122	-0.0105
5	0.0776	0.1195	-0.0219	0.0063	0.0041	5	0.1264	0.1404	-0.0593	0.0205	-0.0076
7	0.1552	0.1285	-0.0203	0.0145	0.0060	7	0.2158	0.1491	-0.0526	0.0284	-0.0019
10	0.2974	0.1629	-0.0224	0.0314	0.0116	10	0.3313	0.1779	-0.0519	0.0417	0.0054
15	0.5741	0.2506	-0.0426	0.0647	0.0291	15	0.5820	0.2799	-0.0688	0.0724	0.0228
25	0.9801	0.4629	-0.1280	0.1146	0.0656	25	1.0136	0.5918	-0.1584	0.1293	0.0608

TABLE 1 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 1 MODEL - Continued

$$\frac{L}{C} = 0.04 \quad \frac{x_2}{C} = 0.80$$

α , deg	C_L	C_D	C_H	C_I	C_n	α , deg	C_L	C_D	C_H	C_I	C_n
$M = 0.60$						$M = 0.95$					
-10	-0.4758	0.1488	0.0250	-0.0617	.0148	-10	-0.5564	0.1860	0.0237	-0.0687	.0221
-7	-0.3720	0.1129	-0.0089	-0.0492	.0119	-7	-0.4150	0.1400	0.0230	-0.0491	.0153
-5	-0.2811	0.0956	-0.0025	-0.0394	.0088	-5	-0.3338	0.1241	0.0243	-0.0409	.0108
-3	-0.2295	0.0895	0.0076	-0.0322	.0069	-3	-0.2596	0.1095	0.0252	-0.0311	.0081
-2	-0.2011	0.0852	0.0061	-0.0282	.0054	-2	-0.2226	0.1071	0.0243	-0.0270	.0065
-1	-0.1730	0.0830	0.0048	-0.0243	.0050	-1	-0.1904	0.1034	0.0242	-0.0225	.0057
0	-0.1406	0.0830	0.0112	-0.0203	.0047	0	-0.1508	0.0962	0.0257	-0.0184	.0050
1	-0.1211	0.0830	0.0102	-0.0171	.0041	1	-0.1212	0.0912	0.0299	-0.0146	.0050
2	-0.0865	0.0744	0.0121	-0.0198	.0050	2	-0.0742	0.0972	0.0331	-0.0094	.0047
3	-0.0433	0.0744	0.0308	-0.0092	.0057	3	-0.0371	0.0937	0.0293	-0.0045	.0052
5	.0108	0.0766	0.0166	-0.0013	.0069	5	.0396	0.1034	0.0323	-0.0056	.0059
7	.0779	0.0934	0.0287	-0.0092	.0072	7	.1236	0.1095	0.0275	-0.0142	.0057
10	.2055	0.1276	0.0186	0.0249	.0091	10	.2720	0.1434	0.0225	0.0315	.0095
15	.4650	0.2362	-0.0157	0.0571	.0214	15	.5836	0.2371	-0.0144	0.0694	.0248
20	.7137	0.3724	-0.0530	0.0899	.0362	20	.8704	0.3526	-0.0757	0.1058	.0442
25	.9148	0.5147	-0.1182	0.1148	.0553	25	.9768	0.4805	-0.1234	0.1193	.0580
$M = 0.80$						$M = 1.00$					
-10	-0.5270	0.1515	0.0207	-0.0659	.0188	-10	-0.5392	0.2036	0.0173	-0.0646	.0220
-7	-0.4052	0.1183	0.0250	-0.0521	.0128	-7	-0.3855	0.1629	0.0091	-0.0466	.0153
-5	-0.3244	0.0981	0.0220	-0.0423	.0100	-5	-0.3027	0.1339	0.0047	-0.0351	.0098
-3	-0.2554	0.0866	0.0283	-0.0343	.0081	-3	-0.2223	0.1279	0.0081	-0.0251	.0079
-2	-0.2173	0.0837	0.0327	-0.0298	.0074	-2	-0.1797	0.1220	0.0052	-0.0205	.0065
-1	-0.1908	0.0793	0.0338	-0.0263	.0060	-1	-0.1561	0.1164	0.0036	-0.0172	.0062
0	-0.1615	0.0793	0.0363	-0.0227	.0055	0	-0.1182	0.1220	0.0099	-0.0126	.0060
1	-0.1233	0.0737	0.0366	-0.0178	.0049	1	-0.0757	0.1140	0.0069	-0.0082	.0042
2	-0.0998	0.0737	0.0365	-0.0147	.0058	2	-0.0351	0.1164	0.0073	-0.0032	.0048
3	-0.0514	0.0752	0.0443	-0.0094	.0055	3	.0000	0.1164	0.0100	-0.0111	.0067
5	.0220	0.0837	0.0475	-0.0004	.0049	5	.0733	0.1175	0.0118	-0.0093	.0074
7	.0954	0.0925	0.0425	0.0085	.0053	7	.1774	0.1291	0.0228	-0.0205	.0079
10	.2334	0.1227	0.0269	0.0245	.0086	10	.3240	0.1629	-0.0002	0.0370	.0120
15	.5211	0.2355	-0.0173	0.0601	.0237	15	.6149	0.2467	-0.0271	0.0717	.0273
20	.7633	0.3538	-0.0635	0.0922	.0376	20	.8869	0.3838	-0.0803	0.1080	.0486
25	.9248	0.4621	-0.1122	0.1122	.0535						
$M = 0.85$						$M = 1.05$					
-10	-0.5586	0.1557	0.0245	-0.0722	.0170	-10	-0.5367	0.1950	0.0185	-0.0642	.0170
-7	-0.4265	0.1219	0.0228	-0.0534	.0126	-7	-0.3804	0.1470	0.0050	-0.0460	.0095
-5	-0.3440	0.1015	0.0270	-0.0438	.0098	-5	-0.2944	0.1325	0.0011	-0.0344	.0048
-3	-0.2697	0.0867	0.0342	-0.0346	.0076	-3	-0.2106	0.1202	0.0010	-0.0241	.0018
-2	-0.2421	0.0812	0.0365	-0.0309	.0066	-2	-0.1721	0.1169	-0.0030	-0.0189	.0010
-1	-0.2064	0.0812	0.0463	-0.0267	.0064	-1	-0.1359	0.1125	-0.0062	-0.0144	.0005
0	-0.1789	0.0743	0.0371	-0.0229	.0060	0	-0.0996	0.1125	-0.0001	-0.0103	.0000
1	-0.1403	0.0743	0.0481	-0.0184	.0050	1	-0.0679	0.1114	0.0008	-0.0065	.0000
2	-0.1101	0.0743	0.0440	-0.0142	.0046	2	-0.0408	0.1058	-0.0064	-0.0017	-0.0018
3	-0.0550	0.0743	0.0432	-0.0096	.0042	3	.0113	0.1114	0.0051	-0.0027	.0010
5	.0138	0.0812	0.0461	-0.0000	.0052	5	.0815	0.1225	0.0083	-0.0113	.0030
7	.0936	0.0881	0.0445	0.0096	.0056	7	.1698	0.1302	0.0071	-0.0203	.0066
10	.2339	0.1233	0.0340	0.0255	.0086	10	.3193	0.1694	0.0116	-0.0378	.0117
15	.5476	0.2328	-0.0141	0.0626	.0246	15	.6092	0.2618	-0.0325	0.0722	.0260
20	.7842	0.3451	-0.0680	0.0948	.0390	20	.8719	0.4121	-0.0898	0.1058	.0454
25	.9356	0.4601	-0.1190	0.1148	.0559	25	1.0779	.5904	-0.1470	0.1343	.0688
$M = 0.90$						$M = 1.10$					
-10	-0.5623	0.1682	0.0257	-0.0692	.0207	-10	-0.5242	0.1612	0.0123	-0.0613	.0068
-7	-0.4276	0.1337	0.0278	-0.0531	.0145	-7	-0.3779	0.1267	0.0041	-0.0444	.0037
-5	-0.3446	0.1135	0.0274	-0.0429	.0106	-5	-0.2839	0.1116	-0.0054	-0.0325	.0005
-3	-0.2721	0.0956	0.0299	-0.0342	.0079	-3	-0.1988	0.0968	-0.0034	-0.0225	-0.0022
-2	-0.2332	0.0904	0.0340	-0.0295	.0066	-2	-0.1638	0.0968	-0.0005	-0.0182	-0.0033
-1	-0.1969	0.0891	0.0424	-0.0256	.0058	-1	-0.1311	0.0946	-0.0061	-0.0136	-0.0035
0	-0.1684	0.0829	0.0403	-0.0208	.0053	0	-0.0874	0.0902	-0.0023	-0.0086	-0.0043
1	-0.1373	0.0829	0.0429	-0.0173	.0051	1	-0.0721	0.0968	0.0116	-0.0053	.0010
2	-0.0959	0.0803	0.0448	-0.0130	.0056	2	-0.0262	0.0946	0.0227	-0.0007	-0.0019
3	-0.0622	0.0816	0.0413	-0.0083	.0056	3	.0109	0.0968	0.0080	-0.0033	-0.0022
5	.0155	0.0865	0.0462	0.0020	.0095	5	.0808	0.1075	0.0077	0.0116	-0.0006
7	.1011	.0995	0.0436	0.0110	.0056	7	.1638	0.1182	0.0101	-0.0205	.0014
10	.2462	0.1337	0.0314	0.0287	.0086	10	.3123	0.1612	0.0037	-0.0371	.0078
15	.5623	0.2358	-0.0113	0.0660	.0258	15	.5788	0.2687	-0.0303	0.0692	.0195
20	.8085	0.3376	-0.0774	0.0963	.0435	20	.8300	0.4189	-0.0859	0.1021	.0390
25	.9510	0.4651	-0.1231	0.1167	.0599	25	1.0375	.5952	-0.1409	0.1309	.0608

CANTER

TABLE 1 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 1 MODEL - Concluded

 $\frac{k}{c} = 0.04$ $\frac{x_s}{c} = 1.00$

α , deg	C_L	C_D	C_H	C_I	C_n	α , deg	C_L	C_D	C_H	C_I	C_n
$M = 0.60$						$M = 0.95$					
-10	-0.6569	0.1531	0.1317	-0.0792	0.0218	-10	-0.6859	0.2175	0.1394	-0.0788	0.0273
-7	-0.5438	0.1349	0.1012	-0.0647	0.0206	-7	-0.5244	0.1663	0.1253	-0.0588	0.0211
-5	-0.4676	0.1209	0.1046	-0.0554	0.0164	-5	-0.4498	0.1504	0.1277	-0.0501	0.0175
-3	-0.3872	0.1101	0.0987	-0.0469	0.0139	-3	-0.3653	0.1320	0.1276	-0.0407	0.0148
-2	-0.3524	0.1101	0.1077	-0.0423	0.0123	-2	-0.3380	0.1260	0.1254	-0.0366	0.0132
-1	-0.3089	0.1092	0.1205	-0.0383	0.0108	-1	-0.3032	0.1198	0.1213	-0.0324	0.0130
0	-0.2806	0.1027	0.1039	-0.0343	0.0104	0	-0.2659	0.1101	0.1218	-0.0286	0.0126
1	-0.2458	0.0996	0.1007	-0.0303	0.0101	1	-0.2286	0.1076	0.1267	-0.0249	0.0126
2	-0.2110	0.0996	0.0994	-0.0257	0.0101	2	-0.1889	0.1051	0.1171	-0.0203	0.0125
3	-0.1675	0.0961	0.0952	-0.0218	0.0108	3	-0.1516	0.1014	0.1262	-0.0166	0.0123
5	-0.1022	0.1040	0.1049	-0.0159	0.0110	5	-0.0621	0.1051	0.1200	-0.0075	0.0128
7	-0.0152	0.1157	0.1008	-0.0027	0.0117	7	0.0249	0.1136	0.1127	0.0041	0.0130
10	0.1044	0.1475	0.0858	0.0139	0.0136	10	0.1963	0.1441	0.0866	0.0253	0.0148
15	0.3654	0.2493	0.0376	0.0469	0.0244	15	0.5219	0.2421	0.0218	0.0656	0.0284
20	0.6221	0.4046	-0.0419	0.0818	0.0382	20	0.8276	0.3703	-0.0708	0.1018	0.0495
25	0.8439	0.5542	-0.1428	0.1096	0.0528	25	0.9294	0.5048	-0.1280	0.1154	0.0645
$M = 0.80$						$M = 1.00$					
-10	-0.6821	0.1727	0.1351	-0.0788	0.0230	-10	-0.6893	0.2220	0.1438	-0.0797	0.0297
-7	-0.5418	0.1453	0.1249	-0.0614	0.0178	-7	-0.5277	0.1730	0.1218	-0.0602	0.0225
-5	-0.4680	0.1264	0.1239	-0.0524	0.0150	-5	-0.4445	0.1497	0.1160	-0.0490	0.0190
-3	-0.3868	0.1104	0.1228	-0.0430	0.0127	-3	-0.3613	0.1379	0.1236	-0.0404	0.0159
-2	-0.3499	0.1060	0.1254	-0.0394	0.0116	-2	-0.3256	0.1286	0.1205	-0.0364	0.0149
-1	-0.3218	0.0986	0.1221	-0.0358	0.0111	-1	-0.2900	0.1262	0.1276	-0.0321	0.0136
0	-0.2790	0.0960	0.1224	-0.0318	0.0101	0	-0.2496	0.1205	0.1268	-0.0281	0.0133
1	-0.2421	0.0915	0.1300	-0.0282	0.0097	1	-0.2187	0.1181	0.1219	-0.0238	0.0128
2	-0.2096	0.0901	0.1194	-0.0237	0.0101	2	-0.1830	0.1146	0.1223	-0.0198	0.0128
3	-0.1727	0.0901	0.1281	-0.0197	0.0094	3	-0.1355	0.1146	0.1230	-0.0155	0.0130
5	-0.0945	0.0856	0.1220	-0.0112	0.0092	5	-0.0475	0.1146	0.1148	-0.0054	0.0124
7	-0.0162	0.0986	0.1198	-0.0004	0.0107	7	0.0428	0.1205	0.1053	0.0054	0.0138
10	0.1373	0.1308	0.1017	0.0179	0.0133	10	0.2092	0.1497	0.0803	0.0256	0.0164
15	0.4326	0.2368	0.0092	0.0537	0.0262	15	0.5443	0.2491	0.0115	0.0678	0.0304
20	0.6909	0.3673	-0.0549	0.0856	0.0410	20	0.8509	0.3893	-0.0616	0.1046	0.0530
25	0.8947	0.4981	-0.1365	0.1102	0.0582	25	1.0054	0.5412	-0.1365	0.1244	0.0703
$M = 0.85$						$M = 1.05$					
-10	-0.6972	0.2014	0.1368	-0.0793	0.0265	-10	-0.6871	0.2105	0.1456	-0.0784	0.0251
-7	-0.5450	0.1524	0.1268	-0.0613	0.0195	-7	-0.5324	0.1611	0.1263	-0.0587	0.0180
-5	-0.4592	0.1333	0.1234	-0.0516	0.0161	-5	-0.4255	0.1433	0.1173	-0.0469	0.0156
-3	-0.3790	0.1129	0.1252	-0.0420	0.0135	-3	-0.3458	0.1265	0.1214	-0.0376	0.0124
-2	-0.3513	0.1062	0.1273	-0.0386	0.0129	-2	-0.3231	0.1208	0.1167	-0.0342	0.0111
-1	-0.3098	0.1035	0.1338	-0.0340	0.0121	-1	-0.2821	0.1154	0.1138	-0.0297	0.0106
0	-0.2822	0.0952	0.1226	-0.0306	0.0114	0	-0.2548	0.1108	0.1159	-0.0262	0.0094
1	-0.2407	0.0924	0.1271	-0.0273	0.0114	1	-0.2093	0.1097	0.1197	-0.0228	0.0098
2	-0.1992	0.0913	0.1297	-0.0227	0.0114	2	-0.1752	0.1040	0.1140	-0.0186	0.0098
3	-0.1577	0.0858	0.1228	-0.0181	0.0121	3	-0.1342	0.1040	0.1221	-0.0142	0.0091
5	-0.0885	0.0913	0.1295	-0.0105	0.0123	5	-0.0478	0.1097	0.1152	-0.0045	0.0099
7	0.0083	0.0913	0.1294	0.0034	0.0114	7	0.0410	0.1208	0.1076	0.0073	0.0106
10	0.1494	0.1333	0.1012	0.0206	0.0145	15	0.5415	0.2551	0.0182	0.0659	0.0286
15	0.4648	0.2354	0.0316	0.0604	0.0245	20	0.8259	0.4061	-0.0614	0.1032	0.0478
20	0.7276	0.3646	-0.0679	0.0915	0.0444	25	1.0534	0.5886	-0.1335	0.1336	0.0714
25	0.8991	0.4938	-0.1465	0.1133	0.0587						
$M = 0.90$						$M = 1.10$					
-10	-0.6823	0.1958	0.1351	-0.0786	0.0259	-10	-0.6627	0.1920	0.1415	-0.0752	0.0198
-7	-0.5443	0.1524	0.1256	-0.0608	0.0202	-7	-0.5157	0.1490	0.1282	-0.0583	0.0163
-5	-0.4584	0.1320	0.1246	-0.0506	0.0161	-5	-0.4523	0.1273	0.1169	-0.0469	0.0128
-3	-0.3750	0.1177	0.1297	-0.0419	0.0136	-3	-0.3445	0.1132	0.1227	-0.0383	0.0100
-2	-0.3438	0.1063	0.1253	-0.0375	0.0127	-2	-0.3160	0.1113	0.1182	-0.0340	0.0091
-1	-0.3021	0.1024	0.1303	-0.0328	0.0123	-1	-0.2721	0.1058	0.1234	-0.0306	0.0078
0	-0.2761	0.0948	0.1234	-0.0292	0.0117	0	-0.2392	0.1058	0.1253	-0.0263	0.0072
1	-0.2370	0.0935	0.1294	-0.0261	0.0114	1	-0.2085	0.1003	0.1249	-0.0226	0.0072
2	-0.1953	0.0870	0.1204	-0.0213	0.0114	2	-0.1690	0.1003	0.1190	-0.0180	0.0075
3	-0.1484	0.0870	0.1245	-0.0170	0.0117	3	-0.1295	0.1003	0.1254	-0.0140	0.0075
5	-0.0781	0.0935	0.1276	-0.0083	0.0119	5	-0.0373	0.1058	0.1180	-0.0027	0.0069
7	0.0078	0.1000	0.1196	0.0028	0.0127	7	0.0505	0.1165	0.1071	0.0083	0.0069
10	0.1406	0.1383	0.1055	0.0237	0.0146	10	0.2151	0.1598	0.0815	0.0290	0.0091
15	0.5026	0.2383	0.0292	0.0640	0.0269	15	0.5201	0.2655	0.0247	0.0656	0.0198
20	0.7631	0.3625	-0.0766	0.0952	0.0430	20	0.7856	0.4187	-0.0529	0.1005	0.0394
25	0.9089	0.4930	-0.1399	0.1154	0.0587						

CONFIDENTIAL

TABLE 2 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 2 MODEL *

 $\frac{x}{a} = 0.04$ $\frac{x_2}{a} = \text{NONE}$

α , deg	C_L	C_D	C_H	C_I	C_N	α , deg	C_L	C_D	C_H	C_I	C_N
$M = 0.60$											
-10	-.4901	.0607	-.0197	-.0623	.0104	-10	-.5498	.1091	.0115	-.0699	.0116
-7	-.3432	.0290	-.0331	-.0418	.0065	-7	-.4068	.0588	-.0077	-.0478	.0063
-5	-.2306	.0210	-.0257	-.0280	.0037	-5	-.2880	.0347	-.0159	-.0325	.0041
-3	-.1233	.0184	-.0082	-.0151	.0023	-3	-.1405	.0217	-.0142	-.0175	.0025
-2	-.0804	.0184	-.0147	-.0098	.0022	-2	-.1042	.0181	-.0114	-.0112	.0020
-1	-.0490	.0191	-.0073	-.0041	.0021	-1	-.0490	.0184	-.0018	-.0045	.0019
0	.0129	.0206	-.0038	.0016	.0020	0	.0184	.0202	.0103	.0032	.0019
1	.0483	.0210	-.0009	.0062	.0020	1	.0674	.0211	.0183	.0087	.0019
2	.0997	.0238	.0039	.0122	.0023	2	.1287	.0245	.0283	.0164	.0030
3	.1287	.0307	.0143	.0186	.0028	3	.1887	.0326	.0318	.0229	.0041
5	.2488	.0517	.0178	.0309	.0053	5	.3284	.0543	.0241	.0394	.0064
7	.3593	.0839	.0292	.0451	.0081	7	.4411	.0799	.0148	.0543	.0117
10	.5201	.1424	.0134	.0672	.0173	10	.6127	.1301	-.0094	.0755	.0188
15	.6713	.2542	-.0397	.0901	.0316	15	.8087	.2470	-.0541	.1041	.0348
20	.7249	.3427	-.0786	.0947	.0422	20	.9190	.3761	-.1234	.1145	.0497
25	.6971	.4146	-.0570	.0918	.0496	25	.9190	.4820	-.1345	.1149	.0402
$M = 0.80$											
-10	-.5386	.0758	-.0174	-.0667	.0111	-10	-.6026	.1248	.0368	-.0734	.0129
-7	-.3639	.0344	-.0339	-.0433	.0063	-7	-.4103	.0692	.0083	-.0489	.0063
-5	-.2548	.0197	-.0251	-.0298	.0044	-5	-.2813	.0415	-.0071	-.0329	.0039
-3	-.1383	.0132	-.0160	-.0159	.0026	-3	-.1645	.0288	-.0086	-.0189	.0025
-2	-.0873	.0125	-.0087	-.0099	.0022	-2	-.1055	.0243	-.0078	-.0116	.0023
-1	-.0437	.0125	-.0035	-.0044	.0021	-1	-.0469	.0231	-.0002	-.0048	.0018
0	.0146	.0130	.0020	.0022	.0021	0	.0164	.0231	.0069	.0021	.0017
1	.0568	.0147	.0095	.0073	.0020	1	.0821	.0202	.0099	.0091	.0019
2	.1092	.0197	.0184	.0137	.0025	2	.1524	.0288	.0180	.0174	.0032
3	.1674	.0250	.0279	.0201	.0039	3	.2110	.0340	.0143	.0244	.0041
5	.2839	.0447	.0366	.0347	.0058	5	.3517	.0559	-.0000	.0414	.0071
7	.4003	.0699	.0350	.0495	.0097	7	.4806	.0836	-.0119	.0569	.0116
10	.5605	.1288	.0190	.0716	.0175	10	.6682	.1442	-.0463	.0813	.0203
15	.6799	.2326	-.0529	.0879	.0308	15	.9027	.2709	-.0784	.1152	.0386
20	.7425	.3236	-.0858	.0941	.0416	20	1.0316	.4151	-.1261	.1365	.0547
25	.7570	.4152	-.0971	.0961	.0513	25	1.0551	.5477	-.1679	.1334	.0695
$M = 0.85$											
-10	-.5526	.0916	-.0094	-.0673	.0109	-10	-.6129	.1295	.0553	-.0724	.0118
-7	-.3889	.0437	-.0308	-.0457	.0061	-7	-.4288	.0782	.0277	-.0501	.0080
-5	-.2592	.0246	-.0277	-.0302	.0039	-5	-.3031	.0497	.0157	-.0349	.0034
-3	-.1364	.0171	-.0133	-.0157	.0026	-3	-.1684	.0331	.0049	-.0191	.0015
-2	-.0955	.0141	-.0066	-.0104	.0022	-2	-.1190	.0276	.0063	-.0119	.0012
-1	-.0409	.0141	-.0005	-.0046	.0021	-1	-.0449	.0248	-.0017	-.0048	.0013
0	.0164	.0151	.0076	.0027	.0021	0	.0292	.0245	.0001	.0034	.0007
1	.0614	.0177	.0162	.0083	.0018	1	.0943	.0293	.0039	.0107	.0015
2	.1160	.0218	.0233	.0143	.0026	2	.1616	.0320	-.0000	.0181	.0028
3	.1719	.0285	.0318	.0213	.0037	3	.2290	.0386	-.0087	.0257	.0033
5	.2934	.0480	.0425	.0362	.0060	5	.3592	.0607	-.0150	.0409	.0065
7	.4230	.0768	.0334	.0526	.0098	7	.4872	.0883	-.0308	.0564	.0109
10	.5731	.1299	.0152	.0729	.0177	10	.6623	.1479	-.0611	.0783	.0190
15	.7040	.2329	-.0584	.0892	.0315	15	.9429	.2926	-.1057	.1165	.0379
20	.7859	.3355	-.1017	.0989	.0434	20	1.1450	.4637	-.0796	.1441	.0605
25	.8050	.4362	-.1100	.1010	.0547	25	1.1988	.6183	-.1917	.1509	.0598
$M = 0.90$											
-10	-.5650	.0985	-.0025	-.0697	.0119	-10	-.6050	.1249	.0541	-.0697	.0097
-7	-.3968	.0521	-.0192	-.0477	.0067	-7	-.4256	.0754	.0315	-.0483	.0044
-5	-.2761	.0284	-.0251	-.0314	.0043	-5	-.2874	.0521	.0156	-.0339	.0013
-3	-.1541	.0186	-.0167	-.0167	.0027	-3	-.1793	.0346	.0091	-.0183	-.0003
-2	-.0989	.0158	-.0093	-.0103	.0021	-2	-.1145	.0308	.0047	-.0115	-.0005
-1	-.0449	.0149	-.0021	-.0041	.0021	-1	-.0540	.0292	.0118	-.0041	-.0005
0	.0064	.0158	.0069	.0017	.0020	0	.0216	.0255	.0018	.0034	-.0017
1	.0616	.0190	.0179	.0084	.0020	1	.0864	.0292	.0034	.0107	-.0007
2	.1156	.0221	.0203	.0146	.0026	2	.1512	.0346	.0019	.0180	.0002
3	.1862	.0500	.0344	.0226	.0040	3	.2161	.0446	-.0026	.0256	.0015
5	.3184	.0521	.0364	.0390	.0066	5	.3457	.0627	-.0176	.0405	.0037
7	.4366	.0790	.0078	.0536	.0103	7	.4645	.0956	-.0274	.0549	.0079
10	.5817	.1279	.0124	.0730	.0172	10	.6331	.1568	-.0584	.0762	.0158
15	.7499	.2368	-.0618	.0939	.0327	15	.9031	.2922	-.1088	.1121	.0342
20	.8375	.3336	-.1101	.1052	.0463	20	1.1235	.4676	-.1549	.1413	.0573
25	.8526	.4547	-.1226	.1075	.0566						
$M = 1.00$											
-10	-.5776	.1056	-.0025	-.0727	.0120	-10	-.6176	.1300	.0573	-.0727	.0120
-7	-.4088	.0571	-.0192	-.0477	.0067	-7	-.4464	.0782	.0315	-.0483	.0044
-5	-.2811	.0284	-.0251	-.0314	.0043	-5	-.2874	.0521	.0156	-.0339	.0013
-3	-.1591	.0186	-.0167	-.0167	.0027	-3	-.1793	.0346	.0091	-.0183	-.0003
-2	-.0989	.0158	-.0093	-.0103	.0021	-2	-.1145	.0308	.0047	-.0115	-.0005
-1	-.0449	.0149	-.0021	-.0041	.0021	-1	-.0540	.0292	.0118	-.0041	-.0005
0	.0064	.0158	.0069	.0017	.0020	0	.0216	.0255	.0018	.0034	-.0017
1	.0616	.0190	.0179	.0084	.0020	1	.0864	.0292	.0034	.0107	-.0007
2	.1156	.0221	.0203	.0146	.0026	2	.1512	.0346	.0019	.0180	.0002
3	.1862	.0500	.0344	.0226	.0040	3	.2161	.0446	-.0026	.0256	.0015
5	.3184	.0521	.0364	.0390	.0066	5	.3457	.0627	-.0176	.0405	.0037
7	.4366	.0790	.0078	.0536	.0103	7	.4645	.0956	-.0274	.0549	.0079
10	.5817	.1279	.0124	.0730	.0172	10	.6331	.1568	-.0584	.0762	.0158
15	.7499	.2368	-.0618	.0939	.0327	15	.9031	.2922	-.1088	.1121	.0342
20	.8375	.3336	-.1101	.1052	.0463	20	1.1235	.4676	-.1549	.1413	.0573
25	.8526	.4547	-.1226	.1075	.0566						
$M = 1.10$											
-10	-.5916	.1125	-.0025	-.0757	.0120	-10	-.6300	.1350	.0593	-.0757	.0120
-7	-.4308	.0601	-.0192	-.0477	.0067	-7	-.4696	.0782	.0315	-.0483	.0044
-5	-.2931	.0284	-.0251	-.0314	.0043	-5	-.2874	.0521	.0156	-.0339	.0013
-3	-.1671	.0186	-.0167	-.0167	.0027	-3	-.1793	.0346	.0091	-.0183	-.0003
-2	-.0989	.0158	-.0093	-.0103	.0021	-2	-.1145	.0308	.0047	-.0115	-.0005
-1	-.0449	.0149	-.0021	-.0041	.0021	-1	-.0540	.0292	.0118	-.0041	-.0005
0	.0064	.0158	.0069	.0017	.0020	0	.0216	.0255	.0018	.0034	-.0017
1	.0616	.0190	.0179	.0084	.0020	1	.0864	.0292	.0034	.0107	-.0007
2	.1156	.0221	.0203	.0146	.0026	2	.1512	.0346	.0019	.0180	.0002
3	.1862	.0500	.0344	.0226	.0040	3	.2161	.0446	-.0026	.0256	.0015
5	.3184	.0521	.0364	.0390	.0066	5	.3457	.0627	-.0176	.0405	.003

TABLE 2 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 2 MODEL - Continued

$$\frac{k}{c} = 0.04 \quad \frac{x_a}{c} = 0.40$$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
$M = 0.95$											
-10	-.4314	.1613	-.1193	-.0542	.0201	-10	-.4852	.2283	-.1090	-.0618	.0264
-7	-.3710	.1294	-.1277	-.0438	.0153	-7	-.4975	.1980	-.0803	-.0607	.0222
-5	-.2998	.1135	-.1286	-.0340	.0125	-5	-.4606	.1768	-.0721	-.0544	.0189
-3	-.2200	.1061	-.1196	-.0229	.0108	-3	-.3621	.1557	-.0779	-.0432	.0159
-2	-.1833	.1040	-.1114	-.0180	.0103	-2	-.3005	.1436	-.0836	-.0346	.0148
-1	-.1445	.1040	-.1065	-.0133	.0102	-1	-.2340	.1405	-.0873	-.0282	.0139
0	-.1100	.1029	-.1037	-.0090	.0101	0	-.1798	.1387	-.0810	-.0202	.0132
1	-.0712	.1083	-.0990	-.0052	.0101	1	-.1355	.1405	-.0825	-.0144	.0129
2	-.0367	.1083	-.0949	-.0011	.0103	2	-.0936	.1332	-.0765	-.0105	.0127
3	.0000	.1135	-.0910	.0033	.0108	3	-.0419	.1363	-.0745	-.0037	.0132
5	.0712	.1240	-.0801	.0137	.0106	5	-.0690	.1465	-.0817	-.0099	.0134
7	.1639	.1348	-.0686	.0237	.0111	7	-.1724	.1526	-.0780	-.0234	.0141
10	.3926	.1719	-.0624	.0499	.0177	10	-.4162	.1799	-.0762	-.0523	.0215
15	.6212	.2599	-.0565	.0798	.0337	15	-.7216	.2555	-.0927	-.0895	.0358
20	.7463	.3363	-.0830	.0955	.0437	20	-.8940	.3657	-.1222	-.1106	.0498
25	.7485	.4105	-.0985	.0952	.0522	25	.9433	.4833	-.1491	-.1173	.0618
$M = 0.80$											
$M = 1.00$											
-10	-.5079	.1951	-.1012	-.0646	.0234	-10	-.4994	.2572	-.0808	-.0622	.0390
-7	-.4786	.1598	-.1191	-.0584	.0188	-7	-.4051	.2146	-.0948	-.0479	.0247
-5	-.3981	.1382	-.1123	-.0471	.0156	-5	-.3345	.1876	-.1047	-.0389	.0214
-3	-.3132	.1253	-.1064	-.0351	.0132	-3	-.2403	.1703	-.1104	-.0268	.0188
-2	-.2649	.1216	-.0988	-.0286	.0121	-2	-.1932	.1645	-.1182	-.0214	.0175
-1	-.2225	.1202	-.0936	-.0229	.0115	-1	-.0989	.1703	-.1276	-.0098	.0149
0	-.1786	.1202	-.0889	-.0178	.0112	0	-.0518	.1622	-.1238	-.0045	.0169
1	-.1346	.1202	-.0842	-.0127	.0110	1	-.0283	.1588	-.1141	-.0018	.0145
2	-.0951	.1202	-.0824	-.0078	.0108	2	-.0118	.1588	-.1151	-.0045	.0143
3	-.0468	.1216	-.0749	-.0029	.0112	3	-.0660	.1645	-.1131	-.0102	.0144
5	.0410	.1295	-.0656	.0084	.0115	5	-.1649	.1761	-.1133	-.0222	.0149
7	.1507	.1382	-.0602	.0215	.0120	7	-.2544	.1761	-.1011	-.0331	.0178
10	.3805	.1670	-.0564	.0486	.0173	10	-.4829	.2108	-.1020	-.0593	.0247
15	.6484	.2425	-.0549	.0822	.0341	15	-.7679	.2827	-.1098	-.0951	.0383
20	.7698	.3217	-.0902	.0957	.0436	20	.9493	.4077	-.1374	-.1204	.0553
25	.7903	.4203	-.1077	.0988	.0542						
$M = 0.85$											
$M = 1.05$											
-10	-.5651	.2138	-.1057	-.0707	.0249	-10	-.4849	.2518	-.0724	-.0616	.0279
-7	-.5309	.1763	-.1018	-.0645	.0204	-7	-.3837	.2096	-.0881	-.0459	.0225
-5	-.4444	.1512	-.1022	-.0531	.0169	-5	-.2977	.1856	-.1026	-.0344	.0197
-3	-.3388	.1362	-.0994	-.0391	.0142	-3	-.1962	.1741	-.1202	-.0221	.0170
-2	-.2949	.1309	-.0959	-.0323	.0133	-2	-.1444	.1686	-.1246	-.0152	.0156
-1	-.2428	.1288	-.0942	-.0256	.0125	-1	-.0947	.1686	-.1315	-.0087	.0154
0	-.1948	.1269	-.0841	-.0198	.0109	0	-.0316	.1686	-.1293	-.0015	.0152
1	-.1399	.1276	-.0832	-.0139	.0115	1	-.0180	.1709	-.1237	-.0051	.0152
2	-.1056	.1262	-.0847	-.0092	.0115	2	-.0564	.1741	-.1279	-.0111	.0149
3	-.0521	.1262	-.0759	-.0040	.0119	3	-.1083	.1797	-.1230	-.0166	.0155
5	.0439	.1329	-.0707	.0083	.0120	5	-.2053	.1930	-.1208	-.0281	.0161
7	.1550	.1431	-.0641	.0216	.0128	7	-.3000	.2074	-.1150	-.0397	.0186
10	.3813	.1667	-.0556	.0483	.0192	10	-.5030	.2296	-.1058	-.0626	.0248
15	.6625	.2428	-.0581	.0832	.0342	15	-.7917	.3128	-.1272	-.0992	.0397
20	.7928	.3278	-.0951	.0982	.0444						
25	.8450	.4411	-.1182	.1061	.0568						
$M = 0.90$											
$M = 1.10$											
-10	-.5473	.2254	-.0981	-.0687	.0249	-10	-.4929	.2424	-.0603	-.0596	.0230
-7	-.5551	.1917	-.0813	-.0666	.0206	-7	-.3843	.2018	-.0846	-.0435	.0174
-5	-.4931	.1695	-.0769	-.0588	.0175	-5	-.2975	.1837	-.0978	-.0328	.0146
-3	-.3795	.1454	-.0854	-.0443	.0144	-3	-.1911	.1730	-.1091	-.0203	.0120
-2	-.3279	.1410	-.0846	-.0374	.0134	-2	-.1411	.1656	-.1182	-.0140	.0110
-1	-.2765	.1358	-.0802	-.0302	.0124	-1	-.0912	.1623	-.1206	-.0077	.0100
0	-.2143	.1346	-.0785	-.0235	.0117	0	-.0282	.1623	-.1310	-.0003	.0096
1	-.1601	.1301	-.0784	-.0163	.0114	1	-.0065	.1645	-.1584	-.0051	.0091
2	-.1136	.1314	-.0762	-.0106	.0113	2	-.0499	.1720	-.1251	-.0112	.0096
3	-.0568	.1314	-.0782	-.0047	.0115	3	-.1042	.1826	-.1155	-.0166	.0099
5	.0413	.1377	-.0740	.0082	.0120	5	-.1911	.1943	-.1178	-.0280	.0122
7	.1497	.1466	-.0702	.0217	.0127	7	-.2997	.2072	-.1107	-.0395	.0146
10	.3950	.1695	-.0654	.0488	.0192	10	-.4842	.2350	-.0964	-.0611	.0219
15	.6816	.2457	-.0698	.0856	.0341	15	-.7709	.3171	-.1226	-.0972	.0366
20	.8391	.3453	-.1095	.1038	.0462						
25	.8726	.4469	-.1257	.1083	.0572						

TABLE 2 - THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 2 MODEL - Continued

 $\frac{c}{a} = 0.04$ $\frac{x_2}{c} = 0.60$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
$M = 0.95$											
-10	-0.6503	0.1839	-0.0500	-0.0819	0.0245	-10	-0.7310	0.2672	-0.0406	-0.0890	0.0317
-7	-0.5466	0.1350	-0.0694	-0.0652	0.0183	-7	-0.6717	0.2125	-0.0214	-0.0792	0.0252
-5	-0.4537	0.1232	-0.0575	-0.0528	0.0146	-5	-0.5803	0.1821	-0.0256	-0.0678	0.0208
-3	-0.3716	0.1115	-0.0461	-0.0416	0.0112	-3	-0.4248	0.1519	-0.0422	-0.0500	0.0168
-2	-0.3241	0.1074	-0.0388	-0.0357	0.0101	-2	-0.3630	0.1457	-0.0411	-0.0416	0.0150
-1	-0.2852	0.1063	-0.0357	-0.0305	0.0092	-1	-0.3087	0.1421	-0.0349	-0.0360	0.0136
0	-0.2377	0.1063	-0.0302	-0.0246	0.0090	0	-0.2519	0.1361	-0.0326	-0.0277	0.0129
1	-0.1988	0.1031	-0.0314	-0.0197	0.0087	1	-0.1976	0.1326	-0.0297	-0.0219	0.0126
2	-0.1556	0.1063	-0.0217	-0.0144	0.0087	2	-0.1408	0.1276	-0.0329	-0.0148	0.0123
3	-0.1123	0.1063	-0.0182	-0.0092	0.0087	3	-0.0716	0.1276	-0.0282	-0.0069	0.0119
5	-0.0108	0.1115	-0.0087	0.0036	0.0090	5	0.0494	0.1336	-0.0254	0.0084	0.0121
7	0.1080	0.1275	-0.0008	0.0174	0.0089	7	0.1852	0.1397	-0.0229	0.0245	0.0139
10	0.3565	0.1752	-0.0147	0.0459	0.0159	10	0.4592	0.1883	-0.0418	0.0577	0.0240
15	0.6071	0.2709	-0.0309	0.0813	0.0323	15	0.7952	0.2854	-0.0671	0.0993	0.0406
20	0.7389	0.3507	-0.0752	0.0977	0.0430	20	0.9211	0.3825	-0.1193	0.1158	0.0524
25	0.7476	0.4304	-0.0864	0.0983	0.0523	25	0.9508	0.4943	-0.1413	0.1210	0.0641
$M = 0.80$											
$M = 1.00$											
-10	-0.7626	0.2272	-0.0497	-0.0925	0.0270	-10	-0.7036	0.2845	-0.0364	-0.0849	0.0336
-7	-0.6306	0.1767	-0.0571	-0.0750	0.0208	-7	-0.5643	0.2346	-0.0572	-0.0666	0.0263
-5	-0.5279	0.1478	-0.0519	-0.0616	0.0165	-5	-0.4722	0.1997	-0.0640	-0.0550	0.0217
-3	-0.4399	0.1298	-0.0385	-0.0496	0.0131	-3	-0.3542	0.1683	-0.0726	-0.0403	0.0180
-2	-0.3813	0.1233	-0.0294	-0.0432	0.0116	-2	-0.2786	0.1661	-0.0791	-0.0304	0.0164
-1	-0.3285	0.1189	-0.0252	-0.0367	0.0105	-1	-0.2125	0.1683	-0.0865	-0.0211	0.0156
0	-0.2786	0.1161	-0.0236	-0.0300	0.0100	0	-0.1417	0.1626	-0.0854	-0.0138	0.0143
1	-0.2288	0.1139	-0.0147	-0.0243	0.0097	1	-0.0826	0.1626	-0.0780	-0.0073	0.0148
2	-0.1848	0.1110	-0.0132	-0.0180	0.0094	2	-0.0354	0.1568	-0.0709	-0.0016	0.0149
3	-0.1520	0.1117	-0.0050	-0.0125	0.0094	3	0.0047	0.1568	-0.0653	0.0041	0.0148
5	-0.0147	0.1103	-0.0037	0.0013	0.0096	5	0.1417	0.1683	-0.0651	0.0193	0.0160
7	0.1144	0.1189	-0.0005	0.0165	0.0100	7	0.2715	0.1719	-0.0595	0.0351	0.0199
10	0.3842	0.1623	-0.0164	0.0487	0.0190	10	0.5194	0.2090	-0.0671	0.0634	0.0279
15	0.6453	0.2452	-0.0420	0.0839	0.0174	15	0.8382	0.3078	-0.0885	0.1032	0.0453
20	0.7775	0.3317	-0.0812	0.0990	0.0223	20	0.9798	0.4180	-0.1321	0.1239	0.0589
25	0.8066	0.4328	-0.0946	0.1019	0.0270	25	1.0979	0.5690	-0.1737	0.1393	0.0793
$M = 0.85$											
$M = 1.05$											
-10	-0.7837	0.2502	-0.0395	-0.0953	0.0309	-10	-0.6782	0.2780	-0.0416	-0.0809	0.0304
-7	-0.6737	0.1921	-0.0474	-0.0808	0.0237	-7	-0.5494	0.2246	-0.0525	-0.0638	0.0228
-5	-0.5610	0.1622	-0.0454	-0.0663	0.0192	-5	-0.4408	0.1945	-0.0673	-0.0508	0.0191
-3	-0.4537	0.1379	-0.0355	-0.0519	0.0152	-3	-0.3278	0.1724	-0.0784	-0.0355	0.0158
-2	-0.3987	0.1312	-0.0247	-0.0455	0.0136	-2	-0.2645	0.1667	-0.0824	-0.0274	0.0142
-1	-0.3437	0.1244	-0.0238	-0.0386	0.0123	-1	-0.1854	0.1646	-0.0842	-0.0192	0.0133
0	-0.2887	0.1217	-0.0229	-0.0317	0.0115	0	-0.1402	0.1612	-0.0837	-0.0125	0.0117
1	-0.2392	0.1203	-0.0167	-0.0252	0.0112	1	-0.0836	0.1612	-0.0829	-0.0060	0.0125
2	-0.1925	0.1203	-0.0158	-0.0188	0.0109	2	-0.0359	0.1612	-0.0804	0.0007	0.0135
3	-0.1265	0.1149	-0.0079	-0.0119	0.0104	3	0.0271	0.1612	-0.0745	0.0075	0.0128
5	-0.0137	0.1163	0.0009	0.0021	0.0102	5	0.1402	0.1701	-0.0657	0.0207	0.0135
7	0.1237	0.1284	-0.0034	0.0181	0.0110	7	0.2871	0.1835	-0.0662	0.0376	0.0176
10	0.3850	0.1622	-0.0181	0.0494	0.0187	10	0.5087	0.2202	-0.0892	0.0638	0.0261
15	0.6820	0.2542	-0.0480	0.0880	0.0354	15	0.8365	0.3336	-0.1086	0.1043	0.0434
20	0.8222	0.3462	-0.0897	0.1043	0.0464	20	1.0580	0.4837	-0.1462	0.1173	0.0637
25	0.8414	0.4530	-0.1093	0.1080	0.0578	25	1.2027	0.6338	-0.1957	0.1512	0.0845
$M = 0.90$											
$M = 1.10$											
-10	-0.7507	0.2546	-0.0367	-0.0927	0.0294	-10	-0.5507	0.2729	-0.0602	-0.0786	0.0249
-7	-0.6963	0.2037	-0.0307	-0.0813	0.0235	-7	-0.5398	0.2194	-0.0489	-0.0616	0.0185
-5	-0.5850	0.1719	-0.0331	-0.0689	0.0192	-5	-0.4310	0.1926	-0.0630	-0.0482	0.0156
-3	-0.4711	0.1464	-0.0272	-0.0540	0.0152	-3	-0.3156	0.1734	-0.0724	-0.0345	0.0119
-2	-0.4090	0.1337	-0.0219	-0.0469	0.0135	-2	-0.2568	0.1638	-0.1090	-0.0267	0.0102
-1	-0.3546	0.1311	-0.0167	-0.0397	0.0122	-1	-0.2002	0.1605	-0.0798	-0.0193	0.0093
0	-0.2925	0.1248	-0.0163	-0.0318	0.0111	0	-0.1415	0.1585	-0.0808	-0.0121	0.0079
1	-0.2382	0.1222	-0.0054	-0.0255	0.0108	1	-0.0871	0.1574	-0.0794	-0.0061	0.0081
2	-0.1812	0.1209	-0.0203	-0.0183	0.0103	2	-0.0392	0.1552	-0.0777	0.0005	0.0087
3	-0.1165	0.1209	-0.0154	-0.0112	0.0103	3	0.0174	0.1605	-0.0697	0.0074	0.0087
5	0.0026	0.1209	-0.0068	0.0037	0.0103	5	0.1306	0.1669	-0.0602	0.0211	0.0104
7	0.1527	0.1337	-0.0098	0.0202	0.0119	7	0.2830	0.1798	-0.0595	0.0373	0.0148
10	0.4271	0.1719	-0.0268	0.0524	0.0207	10	0.4897	0.2194	-0.0657	0.0616	0.0239
15	0.7196	0.2546	-0.0579	0.0913	0.0177	15	0.7944	0.3296	-0.1259	0.1004	0.0399
20	0.8439	0.3565	-0.1035	0.1076	0.0476	20	1.0121	0.4870	-0.1470	0.1314	0.0592
25	0.8801	0.4647	-0.1218	0.1111	0.0593	25	1.2058	0.6680	-0.1693	0.1532	0.0845

TABLE 2 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 2 MODEL - Continued

 $\frac{x}{c} = 0.04$ $\frac{x}{c} = 0.80$

α , deg	c_L	c_D	c_M	c_l	c_n	α , deg	c_L	c_D	c_M	c_l	c_n
$M = 0.60$						$M = 0.95$					
$M = 0.80$						$M = 1.00$					
$M = 0.85$						$M = 1.05$					
$M = 0.90$						$M = 1.10$					
-10	-0.7948	.2066	.0250	-0.0989	.0277	-10	-0.8961	.2946	.0794	-0.1085	.0351
-7	-0.6497	.1566	.0134	-0.0782	.0195	-7	-0.7302	.2191	.0578	-0.0875	.0259
-5	-0.5349	.1299	.0133	-0.0641	.0150	-5	-0.5990	.1850	.0369	-0.0713	.0210
-3	-0.4266	.1107	.0211	-0.0506	.0118	-3	-0.4480	.1583	.0181	-0.0522	.0173
-2	-0.3768	.1087	.0232	-0.0450	.0102	-2	-0.3787	.1460	.0240	-0.0447	.0156
-1	-0.3357	.1033	.0305	-0.0394	.0094	-1	-0.3144	.1425	.0279	-0.0372	.0144
0	-0.2837	.0979	.0350	-0.0335	.0087	0	-0.2673	.1364	.0326	-0.0304	.0131
1	-0.2425	.0927	.0363	-0.0282	.0083	1	-0.2154	.1266	.0327	-0.0240	.0126
2	-0.1884	.0916	.0462	-0.0227	.0085	2	-0.1535	.1241	.0304	-0.0169	.0121
3	-0.1343	.0873	.0432	-0.0164	.0083	3	-0.0743	.1145	.0396	-0.0094	.0115
5	-0.0260	.0927	.0494	-0.0039	.0083	5	.0644	.1181	.0395	.0060	.0117
7	.0931	.1011	.0546	.0115	.0087	7	.2054	.1339	.0305	.0229	.0144
10	.3205	.1492	.0283	.0384	.0156	10	.4777	.1790	-0.0002	.0548	.0230
15	.6129	.2642	-0.0274	.0782	.0335	15	.8292	.2885	-.0513	.0995	.0419
20	.7710	.3430	-.0817	.0982	.0442	20	.9451	.3823	-.1277	.1168	.0531
25	.7645	.4227	-.0981	.0972	.0535	25	.9604	.4918	-.1450	.1194	.0633
$M = 0.90$						$M = 1.10$					
-10	-0.8820	.2415	.0366	-0.1081	.0315	-10	-0.8336	.2993	.0644	-0.1006	.0344
-7	-0.6967	.1821	.0215	-0.0843	.0235	-7	-0.6797	.2329	.0415	-0.0808	.0267
-5	-0.5821	.1489	.0262	-0.0700	.0185	-5	-0.5684	.1945	.0279	-0.0665	.0220
-3	-0.4704	.1273	.0419	-0.0562	.0250	-3	-0.4310	.1654	.0149	-0.0503	.0181
-2	-0.4145	.1186	.0452	-0.0495	.0128	-2	-0.3481	.1596	.0065	-0.0413	.0165
-1	-0.3734	.1113	.0532	-0.0435	.0114	-1	-0.3008	.1537	.0117	-0.0341	.0151
0	-0.3146	.1070	.0542	-0.0368	.0100	0	-0.2297	.1445	.0103	-0.0266	.0146
1	-0.2646	.1013	.0576	-0.0308	.0091	1	-0.1705	.1421	.0158	-0.0194	.0131
2	-0.2117	.0969	.0602	-0.0243	.0085	2	-0.1160	.1375	.0180	-0.0126	.0127
3	-0.1441	.0939	.0592	-0.0165	.0081	3	-0.0497	.1363	.0204	-.0047	.0133
5	-.0206	.0897	.0657	-0.0027	.0084	5	.0900	.1385	.0172	.0108	.0141
7	.1088	.1041	.0674	.0127	.0094	7	.2510	.1537	.0063	.0291	.0172
10	.3645	.1504	.0265	.0435	.0174	10	.5044	.1886	-.0211	.0593	.0250
15	.6556	.2487	-.0362	.0825	.0397	15	.8360	.3051	-.0709	.1006	.0435
20	.7908	.3340	-.0868	.0988	.0441	20	1.0373	.4391	-.1109	.1293	.0620
25	.8085	.4294	-.1067	.1003	.0549						
$M = 0.85$						$M = 1.05$					
-10	-0.9013	.2603	.0503	-0.1108	.0330	-10	-0.8050	.2866	.0664	-0.0963	.0307
-7	-0.7221	.1925	.0304	-0.0878	.0246	-7	-0.6531	.2209	.0446	-0.0787	.0227
-5	-0.5954	.1586	.0336	-0.0711	.0194	-5	-0.5556	.1884	.0371	-0.0640	.0196
-3	-0.4603	.1315	.0404	-0.0560	.0351	-3	-0.4240	.1595	.0233	-0.0485	.0148
-2	-0.4162	.1247	.0479	-0.0493	.0136	-2	-0.3605	.1528	.0224	-0.0413	.0129
-1	-0.3583	.1138	.0520	-0.0422	.0122	-1	-0.2880	.1405	.0162	-0.0323	.0122
0	-0.3087	.1112	.0520	-0.0364	.0114	0	-0.2358	.1395	.0182	-0.0261	.0110
1	-0.2536	.1043	.0591	-0.0297	.0106	1	-0.1791	.1361	.0222	-0.0200	.0104
2	-0.2012	.1003	.0570	-0.0234	.0100	2	-0.1179	.1316	.0221	-0.0120	.0104
3	-0.1351	.0976	.0629	-0.0155	.0092	3	-0.0431	.1316	.0247	-.0045	.0112
5	-.0083	.0976	.0686	-0.0013	.0094	5	.0862	.1372	.0257	.0114	.0124
7	.1185	.1098	.0633	.0134	.0100	7	.2562	.1528	.0101	.0306	.0163
10	.3804	.1519	.0331	.0447	.0170	10	.4875	.1918	-.0236	.0578	.0239
15	.6836	.2534	-.0466	.0861	.0339	15	.8118	.3167	-.0723	.0984	.0415
20	.8269	.3416	-.0977	.1029	.0451						
25	.8555	.4420	-.1140	.1045	.0557						
$M = 0.90$						$M = 1.10$					
-10	-0.9133	.2744	.0646	-0.1106	.0330	-10	-0.7682	.2651	.0618	-0.0920	.0257
-7	-0.7447	.2042	.0475	-0.0897	.0245	-7	-0.6373	.2061	.0437	-0.0742	.0195
-5	-0.6020	.1672	.0387	-0.0720	.0192	-5	-0.5281	.1760	.0358	-0.0616	.0159
-3	-0.4725	.1430	.0373	-0.0563	.0153	-3	-0.4147	.1524	-.0333	.0480	.0128
-2	-0.4152	.1327	.0439	-0.0488	.0138	-2	-0.3514	.1416	.0222	-0.0401	.0111
-1	-0.3555	.1251	.0499	-0.0417	.0123	-1	-0.2990	.1363	.0222	-0.0334	.0100
0	-0.3036	.1174	.0544	-0.0354	.0113	0	-0.2335	.1331	.0252	-0.0262	.0108
1	-0.2517	.1111	.0517	-0.0287	.0106	1	-0.1702	.1277	.0369	-.0189	.0087
2	-0.1972	.1047	.0520	-0.0224	.0104	2	-0.1135	.1256	.0242	-.0116	.0089
3	-0.1220	.1034	.0578	-0.0138	.0100	3	-0.0393	.1256	.0293	-.0036	.0095
5	.0078	.1047	.0603	.0008	.0104	5	.0982	.1363	.0268	.0129	.0108
7	.1635	.1187	.0563	.0181	.0119	7	.2510	.1524	.0116	.0298	.0143
10	.4229	.1620	.0230	.0488	.0198	10	.4758	.2007	-.0202	.0563	.0214
15	.7343	.2552	-.0503	.0909	.0364	15	.7748	.3187	-.0779	.0950	.0373
20	.8640	.3535	-.0753	.1079	.0473	20	1.0105	.4798	-.1245	.1261	.0582
25	.8900	.4620	-.1277	.1110	.0568						

TABLE 2 - THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 2 MODEL -- Continued
 $\frac{t}{c} = 0.04$ $\frac{x_e}{c} = 1.00$

α , deg	c_L	c_D	c_H	c_l	c_n	α , deg	c_L	c_D	c_H	c_l	c_n
$M = 0.60$											
$M = 0.95$											
-10	-0.9565	0.2485	0.1563	-0.1201	0.0329	-10	-1.0534	0.3231	0.2288	-0.1278	0.0387
-7	-0.7807	0.1791	0.1302	-0.0967	0.0230	-7	-0.8526	0.2377	0.1965	-0.1030	0.0277
-5	-0.6592	0.1440	0.1358	-0.0819	0.0172	-5	-0.6816	0.1890	0.1619	-0.0827	0.0218
-3	-0.5421	0.1236	0.1388	-0.0684	0.0140	-3	-0.5255	0.1621	0.1539	-0.0643	0.0177
-2	-0.4879	0.1173	0.1439	-0.0615	0.0125	-2	-0.4585	0.1524	0.1553	-0.0560	0.0160
-1	-0.4424	0.1119	0.1471	-0.0556	0.0112	-1	-0.4040	0.1462	0.1633	-0.0496	0.0146
0	-0.3860	0.1067	0.1459	-0.0490	0.0098	0	-0.3445	0.1377	0.1632	-0.0429	0.0137
1	-0.3361	0.1013	0.1472	-0.0434	0.0091	1	-0.2850	0.1341	0.1649	-0.0357	0.0132
2	-0.2711	0.0961	0.1479	-0.0362	0.0085	2	-0.2156	0.1231	0.1573	-0.0282	0.0128
3	-0.2060	0.0906	0.1417	-0.0283	0.0077	3	-0.1388	0.1231	0.1616	-0.0203	0.0124
5	-0.0867	0.0896	0.1380	-0.0141	0.0073	5	0.0124	0.1219	0.1501	-0.0038	0.0126
7	0.0542	0.0939	0.1320	0.0023	0.0074	7	0.1735	0.1341	0.1310	0.0158	0.0142
10	0.2819	0.1334	0.0957	0.0309	0.0123	10	0.4585	0.1767	0.0713	0.0500	0.0216
15	0.6289	0.2597	-0.0123	0.0750	0.0298	15	0.8080	0.2889	-0.0117	0.0955	0.0398
20	0.8024	0.3446	-0.1011	0.0984	0.0422	20	0.9989	0.4023	-0.1388	0.1213	0.0539
25	0.7915	0.4181	-0.1126	0.0974	0.0501	25	1.0113	0.5120	-0.1654	0.1245	0.0648
$M = 0.80$											
$M = 1.00$											
-10	-1.0307	0.2752	0.1680	-0.1260	0.0330	-10	-1.0075	0.3206	0.2341	-0.1219	0.0362
-7	-0.8098	0.1970	0.1500	-0.0983	0.0229	-7	-0.8297	0.2413	0.2051	-0.0993	0.0269
-5	-0.6714	0.1593	0.1504	-0.0809	0.0178	-5	-0.6999	0.1982	0.1867	-0.0841	0.0212
-3	-0.5448	0.1340	0.1549	-0.0661	0.0139	-3	-0.5500	0.1632	0.1706	-0.0662	0.0171
-2	-0.4859	0.1281	0.1591	-0.0599	0.0124	-2	-0.4670	0.1516	0.1606	-0.0568	0.0153
-1	-0.4270	0.1194	0.1602	-0.0527	0.0113	-1	-0.4030	0.1422	0.1685	-0.0496	0.0138
0	-0.3681	0.1129	0.1633	-0.0456	0.0104	0	-0.3485	0.1341	0.1674	-0.0432	0.0129
1	-0.3180	0.1129	0.1612	-0.0398	0.0096	1	-0.2821	0.1282	0.1666	-0.0356	0.0121
2	-0.2503	0.1007	0.1593	-0.0322	0.0090	2	-0.2134	0.1224	0.1672	-0.0277	0.0114
3	-0.1796	0.0941	0.1597	-0.0241	0.0083	3	-0.1399	0.1224	0.1660	-0.0201	0.0115
5	-0.0560	0.0928	0.1614	-0.0103	0.0081	5	0.0237	0.1259	0.1487	-0.0025	0.0127
7	0.0883	0.1014	0.1492	0.0072	0.0095	7	0.2015	0.1422	0.1227	0.0194	0.0157
10	0.3534	0.1412	0.0848	0.0393	0.0159	10	0.4860	0.1866	0.0525	0.0536	0.0240
15	0.6655	0.2427	-0.0319	0.0804	0.0318	15	0.8415	0.3031	-0.0295	0.0983	0.0415
20	0.8245	0.3345	-0.1042	0.1010	0.0433	20	1.0430	0.4373	-0.1087	0.1277	0.0587
25	0.8275	0.4345	-0.1174	0.1019	0.0533						
$M = 0.85$											
$M = 1.05$											
-10	-1.0488	0.2919	0.1851	-0.1277	0.0337	-10	-0.9624	0.3070	0.2314	-0.1160	0.0337
-7	-0.8142	0.2034	0.1548	-0.0984	0.0237	-7	-0.7950	0.2288	0.2032	-0.0934	0.0246
-5	-0.6652	0.1628	0.1482	-0.0808	0.0181	-5	-0.6810	0.1875	0.1941	-0.0809	0.0198
-3	-0.5382	0.1358	0.1534	-0.0649	0.0142	-3	-0.5516	0.2680	0.1836	-0.0651	0.0157
-2	-0.4802	0.1289	0.1592	-0.0586	0.0124	-2	-0.4744	0.1429	0.1809	-0.0568	0.0142
-1	-0.4250	0.1221	0.1602	-0.0515	0.0118	-1	-0.4086	0.1351	0.1796	-0.0499	0.0130
0	-0.3588	0.1154	0.1603	-0.0440	0.0102	0	-0.3405	0.1284	0.1777	-0.0420	0.0119
1	-0.3036	0.1072	0.1632	-0.0381	0.0096	1	-0.2837	0.1228	0.1756	-0.0355	0.0109
2	-0.2346	0.1018	0.1588	-0.0301	0.0088	2	-0.2111	0.1194	0.1741	-0.0272	0.0104
3	-0.1656	0.0951	0.1584	-0.0222	0.0084	3	-0.1248	0.1194	0.1692	-0.0186	0.0104
5	-0.0276	0.0951	0.1593	-0.0075	0.0088	5	0.0499	0.1284	0.1429	.0024	0.0124
7	0.1245	0.1058	0.1461	0.0105	0.0106	7	0.2270	0.1452	0.1056	0.0224	0.0153
10	0.3698	0.1426	0.1012	0.0398	0.0174	10	0.4767	0.1842	0.0472	0.0527	0.0223
15	0.7148	0.2512	-0.0401	0.0854	0.0343	15	0.8240	0.3126	-0.0372	0.0974	0.0394
20	0.8749	0.3489	-0.1133	0.1055	0.0467	20	1.0782	0.4822	-0.1031	0.1322	0.0546
25	0.8725	0.4507	-0.1269	0.1076	0.0570						
$M = 0.90$											
$M = 1.10$											
-10	-1.0653	0.3002	0.2070	-0.1309	0.0374	-10	-0.9285	0.2848	0.2274	-0.1110	0.0300
-7	-0.8184	0.2108	0.1610	-0.1001	0.0264	-7	-0.7755	0.2149	0.2035	-0.0925	0.0222
-5	-0.6625	0.1725	0.1509	-0.0808	0.0210	-5	-0.6554	0.1773	0.1928	-0.0775	0.0176
-3	-0.5196	0.1495	0.1354	-0.0642	0.0166	-3	-0.5243	0.2524	0.1886	-0.0626	0.0144
-2	-0.4677	0.1406	0.1558	-0.0572	0.0153	-2	-0.4631	0.1944	0.1803	-0.0553	0.0129
-1	-0.4053	0.1290	0.1576	-0.0505	0.0136	-1	-0.4042	0.1289	0.1816	-0.0484	0.0116
0	-0.3482	0.1213	0.1589	-0.0434	0.0125	0	-0.3277	0.1182	0.1771	-0.0404	0.0105
1	-0.2988	0.1150	0.1622	-0.0374	0.0119	1	-0.2622	0.1128	0.1738	-0.0331	0.0100
2	-0.2157	0.1086	0.1554	-0.0284	0.0110	2	-0.1638	0.1128	0.1668	-0.0232	0.0097
3	-0.1533	0.1022	0.1591	-0.0217	0.0106	3	-0.0961	0.1128	0.1614	-0.0152	0.0097
5	-0.0104	0.1009	0.1531	-0.0059	0.0100	5	0.0612	0.1235	0.1421	0.0036	0.0100
7	0.1429	0.1150	0.1370	0.0126	0.0113	7	0.2250	0.1451	0.1028	0.0232	0.0124
10	0.4027	0.1598	0.0915	0.0434	0.0185	10	0.4631	0.1815	0.0442	0.0514	0.0184
15	0.7405	0.2555	-0.0480	0.0891	0.0346	15	0.7865	0.3115	-0.0349	0.0945	0.0351
20	0.9094	0.3641	-0.1226	0.1108	0.0478	20	1.0377	0.4835	-0.1008	0.1276	0.0576
25	0.9224	0.4664	-0.1434	0.1127	0.0582						

TABLE 2 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 2 MODEL -- Continued
 $\frac{L}{c} = 0.06$ $\frac{x_s}{c} = \text{NONE}$

α_2 deg	c_L	c_D	c_M	c_l	c_n	α_2 deg	c_L	c_D	c_M	c_l	c_n
$M = 0.60$						$M = 0.95$					
-10	-0.4711	0.0359	0.0274	-0.0524	0.0010	-10	-0.5169	0.1101	0.0389	-0.0406	0.0043
-7	-0.2944	0.0084	-0.0110	-0.0381	0.0007	-7	-0.3569	0.0631	0.0222	-0.0420	0.0004
-5	-0.1767	0.0000	-0.0197	-0.0285	0.0012	-5	-0.2609	0.0474	0.0000	-0.0291	-0.0013
-3	-0.0841	0.0000	-0.0408	-0.0170	-0.0007	-3	-0.1600	0.0394	-0.0050	-0.0175	-0.0019
-2	-0.0449	0.0000	-0.0372	-0.0122	0.0007	-2	-0.1088	0.0394	0.0022	-0.0120	-0.0020
-1	0.0000	0.0028	-0.0310	-0.0068	0.0010	-1	-0.0688	0.0394	0.0120	-0.0070	-0.0022
0	0.0421	0.0140	-0.0310	-0.0013	0.0007	0	-0.0176	0.0394	0.0070	-0.0016	-0.0020
1	0.0897	0.0140	-0.0128	0.0020	0.0000	1	-0.0352	0.0426	0.0070	0.0047	-0.0024
2	0.1262	0.0000	-0.0310	0.0068	0.0000	2	-0.0864	0.0442	0.0248	0.0117	-0.0028
3	0.1598	0.0219	-0.0249	0.0116	0.0003	3	-0.1360	0.0503	0.0233	0.0159	-0.0022
5	0.2496	0.0415	-0.0186	0.0211	0.0003	5	-0.2273	0.0643	0.0191	0.0264	-0.0020
7	0.3365	0.0550	-0.0186	0.0313	0.0016	7	-0.3201	0.0864	0.0191	0.0404	0.0000
10	0.4683	0.1105	-0.0197	0.0497	0.0085	10	-0.4721	0.1386	-0.0142	0.0583	0.0050
15	0.6085	0.2344	-0.0682	0.0714	0.0209	15	-0.7234	0.2487	-0.0744	0.0893	0.0247
20	0.6786	0.3449	-0.1167	0.0783	0.0226	20	-0.8866	0.3809	-0.1699	0.1018	0.0419
25	0.6393	0.4245	-0.1216	0.0762	0.0388	25	-0.9602	0.5086	-0.2194	0.1088	0.0577
$M = 0.80$						$M = 1.00$					
-10	-0.4994	0.0543	0.0117	-0.0581	0.0044	-10	-0.5765	0.1282	0.0753	-0.0646	0.0039
-7	-0.3285	0.0300	0.0664	-0.0401	0.0011	-7	-0.4032	0.0828	0.0305	-0.0458	0.0000
-5	-0.2146	0.0186	-0.0282	-0.0276	0.0011	-5	-0.2882	0.0604	0.0183	-0.0312	-0.0029
-3	-0.1177	0.0148	-0.0202	-0.0171	0.0005	-3	-0.1656	0.0512	0.0081	-0.0182	-0.0016
-2	-0.0722	0.0186	-0.0043	-0.0120	0.0000	-2	-0.1119	0.0454	0.0057	-0.0115	-0.0041
-1	-0.0266	0.0167	-0.0126	-0.0069	-0.0002	-1	-0.0552	0.0454	0.0123	-0.0048	-0.0039
0	0.0133	0.0186	-0.0084	-0.0014	0.0000	0	0.0061	0.0454	-0.0007	0.0015	-0.0037
1	0.0608	0.0281	0.0000	-0.0046	0.0006	1	0.0721	0.0454	0.0000	0.0086	-0.0048
2	0.1082	0.0281	0.0043	0.0092	-0.0013	2	0.1257	0.0527	0.0000	0.0153	-0.0036
3	0.1462	0.0372	0.0117	0.0143	0.0006	5	0.1840	0.0558	-0.0067	0.0216	-0.0032
5	0.2488	0.0467	0.0084	0.0249	0.0006	7	0.4094	0.0966	-0.0305	0.0480	0.0013
7	0.3513	0.0672	0.0043	0.0373	0.0009	10	0.5857	0.1555	-0.0678	0.0688	0.0101
10	0.4880	0.1215	0.0000	0.0558	0.0051	15	0.8739	0.2790	-0.1557	0.1016	0.0321
15	0.5963	0.2374	-0.0757	0.0719	0.0210	20	1.0794	0.4449	-0.1899	0.1265	0.0565
20	0.6779	0.3361	-0.1176	0.0811	0.0329	25	1.1407	0.6032	-0.2446	0.1321	0.0749
25	0.6969	0.4204	-0.1445	0.0820	0.0398						
$M = 0.85$						$M = 1.05$					
-10	-0.5047	0.0685	0.0047	-0.0597	0.0025	-10	-0.5682	0.1231	0.0729	-0.0643	0.0046
-7	-0.3620	0.0385	-0.0118	-0.0403	0.0002	-7	-0.4019	0.0795	0.0378	-0.0443	0.0007
-5	-0.2425	0.0264	-0.0197	-0.0290	0.0006	-5	-0.2738	0.0580	0.0195	-0.0343	-0.0029
-3	-0.1302	0.0175	-0.0197	-0.0173	0.0015	-3	-0.1590	0.0492	0.0124	-0.0179	-0.0039
-2	-0.0892	0.0175	-0.0078	-0.0121	0.0010	-2	-0.1119	0.0456	0.0124	-0.0107	-0.0034
-1	-0.0464	0.0175	-0.0078	-0.0073	0.0006	-1	-0.0486	0.0508	0.0065	-0.0221	-0.0034
0	0.0000	0.0246	-0.0056	0.0035	-0.0010	0	0.0103	0.0456	-0.0033	0.0018	-0.0032
1	0.0464	0.0264	0.0000	0.0043	0.0015	1	-0.0751	0.0477	0.0065	0.0089	-0.0034
2	0.0874	0.0317	0.0118	0.0100	0.0010	2	-0.1281	0.0551	-0.0039	0.0150	-0.0024
3	0.1373	0.0350	0.0143	0.0152	0.0010	3	-0.1825	0.0580	0.0131	0.0204	-0.0024
5	0.2497	0.0492	0.0134	0.0268	0.0010	5	0.3003	0.0795	-0.0260	0.0339	-0.0015
7	0.3602	0.0770	0.0056	0.0398	0.0010	7	0.4151	0.1131	-0.0437	0.0468	-0.0024
10	0.4940	0.1316	-0.0103	0.0580	0.0058	10	0.5771	0.1666	-0.0638	0.0675	0.0125
15	0.6099	0.2368	-0.0789	0.0736	0.0193	15	0.8656	0.3086	-0.1459	0.0982	0.0305
20	0.7080	0.3420	-0.1334	0.0844	0.0321	20	1.0776	0.4449	-0.2019	0.1251	0.0589
25	0.7401	0.4298	-0.1499	0.0870	0.0442	25	1.1836	0.6342	-0.2559	0.1386	0.0743
$M = 0.90$						$M = 1.10$					
-10	-0.5062	0.0827	0.0276	-0.0588	0.0035	-10	-0.5521	0.1155	0.0720	-0.0618	0.0079
-7	-0.3666	0.0464	-0.0097	-0.0429	0.0012	-7	-0.3845	0.0725	0.0326	-0.0430	0.0038
-5	-0.2489	0.0299	-0.0126	-0.0294	0.0010	-5	-0.2704	0.0558	0.0156	-0.0299	0.0008
-3	-0.1396	0.0249	-0.0164	-0.0176	0.0010	-3	-0.1529	0.0459	0.0062	-0.0186	-0.0005
-2	-0.1144	0.0249	-0.0074	-0.0122	0.0012	-2	-0.1076	0.0445	0.0113	-0.0096	-0.0008
-1	-0.0555	0.0232	-0.0052	-0.0073	0.0010	-1	-0.0487	0.0445	-0.0007	0.0045	-0.0008
0	-0.0084	0.0249	0.0030	-0.0004	0.0010	0	0.0099	0.0459	-0.0032	0.0014	-0.0010
1	0.0505	0.0313	0.0038	0.0061	-0.0016	1	0.0708	0.0487	-0.0094	0.0082	-0.0010
2	0.0875	0.0330	0.0173	0.0106	-0.0016	2	0.1161	0.0529	-0.0094	0.0157	-0.0022
3	0.1379	0.0380	0.0186	0.0155	-0.0016	3	0.1755	0.0668	-0.0156	0.0196	-0.0005
5	0.2506	0.0543	0.0291	0.0290	-0.0014	5	0.2930	0.0807	-0.0300	0.0320	0.0016
7	0.3498	0.0794	0.0000	0.0404	-0.0002	7	0.4134	0.1087	-0.0501	0.0440	0.0044
10	0.4827	0.1339	-0.0149	0.0575	0.0039	10	0.5677	0.1670	-0.0783	0.0618	0.0132
15	0.6592	0.2449	-0.0782	0.0812	0.0211	15	0.8352	0.3092	-0.1421	0.0924	0.0309
20	0.7736	0.3589	-0.1526	0.0910	0.0352	20	1.0306	0.4776	-0.1973	0.1125	0.0528
25	0.8190	0.4547	-0.1823	0.0951	0.0483	25	1.1524	0.6543	-0.2549	0.1333	0.0347

TABLE 2 - THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 2 MODEL. Continued.

$$\frac{t}{c} = 0.06 \quad \frac{x_s}{c} = 0.40$$

α_2 deg	c_L	c_D	c_H	c_I	c_n	α_2 deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
$M = 0.95$											
-10	-0.4178	0.1211	-0.0496	-0.0477	0.0072	-10	-0.5153	0.2205	-0.0535	-0.0602	0.0126
-7	-0.3337	0.0965	-0.1178	-0.0429	0.0081	-7	-0.4961	0.2045	-0.0389	-0.0567	0.0108
-5	-0.2636	0.0880	-0.1117	-0.0347	0.0059	-5	-0.4449	0.1780	-0.0425	-0.0509	0.0084
-3	-0.1907	0.0880	-0.1117	-0.0259	0.0056	-3	-0.3521	0.1575	-0.0495	-0.0392	0.0063
-2	-0.1571	0.0965	-0.0992	-0.0225	0.0049	-2	-0.3009	0.1543	-0.0531	-0.0330	0.0058
-1	-0.1254	0.0965	-0.1054	-0.0191	0.0052	-1	-0.2529	0.1527	-0.0495	-0.0256	0.0052
0	-0.0897	0.0965	-0.0992	-0.0156	0.0056	0	-0.2048	0.1495	-0.0566	-0.0213	0.0046
1	-0.0589	0.1021	-0.1005	-0.0109	0.0059	1	-0.1408	0.1527	-0.0638	-0.0155	0.0046
2	-0.0308	0.1049	-0.0992	-0.0075	0.0052	2	-0.0928	0.1607	-0.0672	-0.0074	0.0061
3	-0.0112	0.1105	-0.0882	-0.0041	0.0056	3	-0.0512	0.1543	-0.0602	-0.0043	0.0069
5	0.0477	0.1239	-0.0882	-0.0034	0.0056	5	0.0160	0.1652	-0.0658	0.0054	0.0063
7	0.1150	0.1239	-0.0868	-0.0102	0.0036	7	0.1088	0.1700	-0.0672	0.0151	0.0065
10	0.2804	0.1514	-0.0868	0.0286	0.0049	10	0.2881	0.1812	-0.0672	0.0350	0.0082
15	0.5216	0.2484	-0.0868	0.0592	0.0147	15	0.6210	0.2519	-0.1083	0.0715	0.0218
20	0.6225	0.3421	-0.0992	0.0729	0.0235	20	0.8034	0.3620	-0.1486	0.0944	0.0382
25	0.6506	0.4273	-0.1427	0.0755	0.0313	25	0.8962	0.4801	-0.1982	0.1037	0.0521
$M = 0.80$											
$M = 1.00$											
-10	-0.5106	0.1625	-0.0756	-0.0631	0.0117	-10	-0.5027	0.2486	-0.0373	-0.0573	0.0150
-7	-0.4632	0.1401	-0.0831	-0.0567	0.0099	-7	-0.3985	0.2155	-0.0509	-0.0450	0.0114
-5	-0.3873	0.1215	-0.0866	-0.0475	0.0073	-5	-0.3341	0.1916	-0.0712	-0.0372	0.0093
-3	-0.3018	0.1120	-0.0797	-0.0364	0.0055	-3	-0.2238	0.1763	-0.0847	-0.0238	0.0084
-2	-0.2790	0.1159	-0.0478	-0.0290	0.0049	-2	-0.1901	0.1735	-0.0882	-0.0190	0.0080
-1	-0.2316	0.1120	-0.0714	-0.0258	0.0044	-1	-0.1349	0.1735	-0.0970	-0.0130	0.0084
0	-0.1974	0.1159	-0.0671	-0.0212	0.0042	0	-0.0736	0.1735	-0.0983	-0.0052	0.0091
1	-0.1500	0.1158	-0.0706	-0.0166	0.0040	1	-0.0337	0.1735	-0.0983	-0.0004	0.0091
2	-0.1177	0.1215	-0.0630	-0.0134	0.0042	2	0.0051	0.1809	-0.0983	0.0052	0.0093
3	-0.0816	0.1215	-0.0630	-0.0092	0.0044	3	0.0397	0.1824	-0.1018	0.0093	0.0094
5	-0.0076	0.1306	-0.0614	-0.0005	0.0051	5	0.1410	0.2035	-0.1085	0.0201	0.0101
7	0.0778	0.1401	-0.0588	-0.0092	0.0044	7	0.2054	0.2020	-0.1051	0.0275	0.0120
10	0.2658	0.1587	-0.0545	-0.0309	0.0044	10	0.3862	0.2216	-0.1037	0.0465	0.0146
15	0.5334	0.2426	-0.0671	-0.0622	0.0155	15	0.8879	0.2940	-0.1424	0.0785	0.0273
20	0.6473	0.3269	-0.1168	-0.0779	0.0256	20	0.9104	0.4221	-0.1932	0.1055	0.0469
25	0.6967	0.4032	-0.0840	-0.0816	0.0353	25	1.0606	0.5803	-0.2474	0.1235	0.0665
$M = 0.85$											
$M = 1.05$											
-10	-0.5330	0.1754	-0.0710	-0.0649	0.0130	-10	-0.4887	0.2347	-0.0293	-0.0554	0.0156
-7	-0.4974	0.1544	-0.0710	-0.0601	0.0097	-7	-0.3798	0.2029	-0.0518	-0.0422	0.0123
-5	-0.4207	0.1316	-0.0726	-0.0511	0.0068	-5	-0.2915	0.1811	-0.0814	-0.0318	0.0108
-3	-0.3458	0.1226	-0.0695	-0.0403	0.0048	-3	-0.2032	0.1737	-0.0932	-0.0214	0.0103
-2	-0.2995	0.1226	-0.0670	-0.0346	0.0043	-2	-0.1590	0.1708	-0.0932	-0.0157	0.0103
-1	-0.2567	0.1209	-0.0650	-0.0286	0.0041	-1	-0.1060	0.1678	-0.1009	-0.0097	0.0108
0	-0.2139	0.1226	-0.0615	-0.0242	0.0041	0	-0.0559	0.1737	-0.1042	-0.0032	0.0103
1	-0.1765	0.1226	-0.0630	-0.0190	0.0041	1	-0.0118	0.1737	-0.1042	0.0018	0.0111
2	-0.1426	0.1226	-0.0552	-0.0156	0.0046	2	0.0294	0.1811	-0.1022	0.0075	0.0115
3	-0.1016	0.1244	-0.0592	-0.0108	0.0048	3	0.0618	0.1881	-0.1074	0.0144	0.0120
5	-0.0107	0.1333	-0.0592	-0.0004	0.0050	5	0.1502	0.2014	-0.1140	0.0211	0.0128
7	0.0731	0.1401	-0.0592	-0.0082	0.0048	7	0.2385	0.2129	-0.1146	0.0300	0.0147
10	0.2692	0.1629	-0.0583	0.0312	0.0056	10	0.4004	0.2361	-0.1061	0.0468	0.0181
15	0.5544	0.2457	-0.0789	0.0645	0.0172	15	0.6742	0.3112	-0.1433	0.0776	0.0318
20	0.6846	0.3330	-0.1231	0.0814	0.0268	20	0.9127	0.4416	-0.1993	0.1043	0.0507
25	0.7434	0.4207	-0.1537	0.0865	0.0394	25	1.0776	0.6083	-0.2572	0.1247	0.0724
$M = 0.90$											
$M = 1.10$											
-10	-0.5279	0.2017	-0.0573	-0.0632	0.0117	-10	-0.4670	0.2018	-0.0332	-0.0522	0.0176
-7	-0.5279	0.1752	-0.0483	-0.0620	0.0104	-7	-0.3651	0.1741	-0.0594	-0.0399	0.0153
-5	-0.4690	0.1570	-0.0483	-0.0521	0.0078	-5	-0.2802	0.1602	-0.0814	-0.0306	0.0127
-3	-0.3766	0.1405	-0.0506	-0.0445	0.0059	-3	-0.1840	0.1503	-0.0940	-0.0199	0.0115
-2	-0.3379	0.1405	-0.0409	-0.0388	0.0055	-2	-0.1472	0.1460	-0.0920	-0.0148	0.0125
-1	-0.3009	0.1372	-0.0409	-0.0335	0.0047	-1	-0.1019	0.1460	-0.0958	-0.0098	0.0137
0	-0.2522	0.1355	-0.0394	-0.0277	0.0045	0	-0.0538	0.1489	-0.1033	-0.0041	0.0138
1	-0.2135	0.1355	-0.0409	-0.0233	0.0041	1	-0.0085	0.1531	-0.1102	0.0014	0.0142
2	-0.1832	0.1355	-0.0335	-0.0184	0.0041	2	0.0311	0.1602	-0.1033	0.0069	0.0145
3	-0.1345	0.1207	-0.0356	-0.0143	0.0043	3	0.0651	0.1670	-0.1064	0.0106	0.0143
5	-0.0252	0.1405	-0.0491	-0.0021	0.0041	5	0.1443	0.1794	-0.1126	0.0192	0.0153
7	0.0672	0.1520	-0.0573	0.0094	0.0051	7	0.2434	0.1920	-0.1153	0.0295	0.0168
10	0.2656	0.1705	-0.0565	0.0359	0.0068	10	0.3878	0.2213	-0.1064	0.0453	0.0202
15	0.5733	0.2481	-0.0893	0.0678	0.0190	15	0.6595	0.2992	-0.1408	0.0735	0.0324
20	0.7414	0.3473	-0.1302	0.0877	0.0324	20	0.8774	0.4384	-0.1878	0.0993	0.0502
25	0.8120	0.4499	-0.1748	0.0942	0.0440	25	1.0444	0.6153	-0.2524	0.1188	0.0727

TABLE 2 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 2 MODEL - Continued

$$\frac{c}{c} = 0.06 \quad \frac{x_s}{c} = 0.60$$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
-10	-0.5917	0.1352	-0.0123	-0.0674	0.0101	-10	-0.7250	0.2596	0.0219	-0.0816	0.0188
-7	-0.4851	0.1239	-0.0446	-0.0545	0.0085	-7	-0.6242	0.2157	0.0213	-0.0691	0.0141
-5	-0.4122	0.1105	-0.0323	-0.0469	0.0075	-5	-0.5281	0.1812	0.0070	-0.0583	0.0114
-3	-0.3281	0.0993	-0.0435	-0.0388	0.0065	-3	-0.4081	0.1607	-0.0106	-0.0451	0.0089
-2	-0.2944	0.0993	-0.0435	-0.0340	0.0052	-2	-0.3441	0.1591	-0.0106	-0.0365	0.0080
-1	-0.2412	0.0965	-0.0422	-0.0286	0.0045	-1	-0.2961	0.1575	-0.0177	-0.0307	0.0076
0	-0.2047	0.0965	-0.0372	-0.0238	0.0043	0	-0.2561	0.1495	-0.0070	-0.0260	0.0071
1	-0.1654	0.0993	-0.0249	-0.0211	0.0062	1	-0.2081	0.1495	-0.0106	-0.0206	0.0067
2	-0.1206	0.0993	-0.0236	-0.0177	0.0065	2	-0.1760	0.1447	0.0000	-0.0159	0.0067
3	-0.0841	0.1021	-0.0310	-0.0136	0.0075	3	-0.1120	0.1418	-0.0036	-0.0089	0.0075
5	.0028	0.1105	-0.0310	-0.0013	0.0075	5	.0000	0.1463	-0.0106	.0039	0.0071
7	.0925	0.1049	-0.0249	.0089	.0068	7	.1280	0.1495	-0.0142	.0182	.0080
10	.2776	0.1492	-0.0372	.0293	.0075	10	.3521	0.1856	-0.0460	.0420	.0108
15	.5328	0.2591	-0.0745	.0619	.0176	15	.6626	0.2676	-0.0885	.0769	.0294
20	.6590	0.3612	-0.1117	.0796	.0280	20	.8162	0.6690	-0.1416	.0955	.0448
25	.6702	0.4414	-0.1427	.0796	.0356	25	.9346	0.4833	-0.2018	.1068	.0569
$M = 0.80$											
-10	-0.6929	0.1925	-0.0050	-0.0797	0.0157	-10	-0.6409	0.2790	0.0040	-0.0730	0.0196
-7	-0.5695	0.1549	-0.0295	-0.0654	0.0113	-7	-0.5274	0.2263	-0.0169	-0.0592	0.0153
-5	-0.4860	0.1344	-0.0295	-0.0553	0.0086	-5	-0.4293	0.1959	-0.0238	-0.0458	0.0127
-3	-0.3948	0.1215	-0.0169	-0.0442	0.0064	-3	-0.3220	0.1763	-0.0475	-0.0346	0.0109
-2	-0.3607	0.1177	-0.0026	-0.0396	0.0057	-2	-0.2637	0.1705	-0.0440	-0.0275	0.0103
-1	-0.3151	0.1120	-0.0109	-0.0350	0.0057	-1	-0.2208	0.1736	-0.0509	-0.0223	0.0100
0	-0.2754	0.1120	-0.0084	-0.0295	0.0057	0	-0.1656	0.1659	-0.0509	-0.0156	0.0100
1	-0.2278	0.1082	-0.0084	-0.0253	0.0064	1	-0.1227	0.1659	-0.0542	-0.0112	0.0103
2	-0.1822	0.1063	0.0000	-0.0194	0.0068	2	-0.0767	0.1659	-0.0440	-0.0048	0.0109
3	-0.1424	0.1101	-0.0033	-0.0147	0.0068	3	-0.0153	0.1613	-0.0475	.0011	0.0109
5	-0.0323	0.1120	-0.0043	-0.0041	0.0064	5	.0767	0.1659	-0.0509	.0123	0.0109
7	.0664	0.1220	-0.0043	.0078	.0062	7	.1993	0.1736	-0.0536	.0253	.0118
10	.2847	0.1477	-0.0252	.0318	.0066	10	.3894	0.1917	-0.0644	.0450	.0127
15	.5448	0.2426	-0.0630	.0650	.0219	15	.7053	0.2941	-0.1153	.0804	.0296
20	.6739	0.3288	-0.1049	.0811	.0327	20	.9566	0.4299	-0.1729	.1690	.0528
25	.7214	0.4203	-0.1428	.0857	.0437	25	1.0579	0.5731	-0.2340	.1250	.0715
$M = 0.85$											
-10	-0.7220	0.2068	-0.0040	-0.0831	0.0174	-10	-0.6212	0.2535	-0.0033	-0.0700	0.0216
-7	-0.5972	0.1665	-0.0221	-0.0701	0.0141	-7	-0.5005	0.2099	-0.0228	-0.0568	0.0175
-5	-0.4995	0.1401	-0.0197	-0.0575	0.0104	-5	-0.4093	0.1811	-0.0391	-0.0454	0.0147
-3	-0.4100	0.1298	-0.0158	-0.0472	0.0083	-3	-0.3091	0.1666	-0.0502	-0.0336	0.0170
-2	-0.3726	0.1226	-0.0118	-0.0428	0.0075	-2	-0.2503	0.1593	-0.0489	-0.0264	0.0127
-1	-0.3262	0.1226	-0.0040	-0.0365	0.0060	-1	-0.2061	0.1593	-0.0469	-0.0207	0.0122
0	-0.2924	0.1177	0.0000	-0.0316	0.0058	0	-0.1472	0.1563	-0.0579	-0.0147	0.0123
1	-0.2318	0.1141	-0.0040	-0.0242	0.0054	1	-0.1030	0.1549	-0.0554	-0.0097	0.0125
2	-0.1961	0.1141	-0.0000	-0.0195	0.0056	2	-0.0618	0.1534	-0.0554	-0.0043	0.0135
3	-0.1515	0.1141	-0.0078	-0.0147	0.0056	3	-0.0029	0.1563	-0.0586	.0014	0.0139
5	-0.0446	0.1141	-0.0000	-0.0035	0.0058	5	.1030	0.1608	-0.0515	.0136	0.0139
7	.0660	0.1244	0.0000	.0099	.0064	7	.2208	0.1693	-0.0554	.0261	.0135
10	.2852	0.1579	-0.0181	.0333	.0075	10	.4034	0.2029	-0.0716	.0457	.0156
15	.5669	0.2506	-0.0679	.0692	.0199	15	.6919	0.3036	-0.1212	.0779	.0318
20	.7043	0.3419	-0.1215	.0848	.0328	20	.9335	0.4516	-0.1823	.1058	.0510
25	.7666	0.4332	-0.1569	.0909	.0446	25	1.0923	0.6083	-0.2443	.1263	.0729
$M = 0.90$											
-10	-0.7481	0.2397	.0149	-0.0837	0.0172	-10	-0.5918	0.2296	0.0000	-0.0670	0.0232
-7	-0.6304	0.1903	-0.0038	-0.0718	0.0131	-7	-0.4813	0.1880	-0.0250	-0.0596	0.0181
-5	-0.5212	0.1621	-0.0112	-0.0592	0.0100	-5	-0.3907	0.1670	-0.0326	-0.0436	0.0151
-3	-0.4371	0.1490	-0.0104	-0.0481	0.0076	-3	-0.2831	0.1475	-0.0470	-0.0316	0.0145
-2	-0.3951	0.1422	-0.0112	-0.0428	0.0070	-2	-0.2520	0.1461	-0.0438	-0.0261	0.0140
-1	-0.3480	0.1355	.0074	-0.0376	0.0067	-1	-0.1954	0.1393	-0.0532	-0.0210	0.0137
0	-0.3093	0.1321	-0.0112	-0.0318	0.0061	0	-0.1416	0.1393	-0.0595	-0.0155	0.0142
1	-0.2606	0.1321	-0.0126	-0.0261	0.0059	1	-0.0934	0.1393	-0.0589	-0.0100	0.0142
2	-0.2169	0.1274	.0149	-0.0200	0.0061	2	-0.0680	0.1393	-0.0470	-0.0048	0.0145
3	-0.1513	0.1241	.0074	-0.0147	0.0055	3	-0.0028	0.1393	-0.0501	.0007	0.0150
5	-0.0336	0.1274	0.0000	-0.0016	0.0061	5	.0991	0.1461	-0.0520	.0127	0.0144
7	.0841	0.1405	-0.0052	.0130	.0068	7	.2124	0.1603	-0.0564	.0251	0.0150
10	.2942	0.1654	-0.0186	.0355	.0080	10	.3964	0.1951	-0.0720	.0436	.0189
15	.5968	0.2481	-0.0706	.0710	.0254	15	.6795	0.2993	-0.1190	.0732	.0339
20	.7448	0.3473	-0.1338	.0877	.0404	20	.9032	0.4524	-0.1753	.1003	.0524
25	.8238	0.4499	-0.1748	.0955	.0526	25	1.0618	0.6223	-0.2443	.1203	.0728
$M = 1.10$											
-10	-0.5918	0.2296	0.0000	-0.0670	0.0232	-10	-0.4813	0.1880	-0.0250	-0.0596	0.0181
-7	-0.4813	0.1880	-0.0250	-0.0596	0.0181	-7	-0.3907	0.1670	-0.0326	-0.0436	0.0151
-5	-0.3907	0.1670	-0.0326	-0.0436	0.0151	-5	-0.2831	0.1475	-0.0470	-0.0316	0.0145
-3	-0.2831	0.1475	-0.0470	-0.0316	0.0145	-3	-0.2520	0.1461	-0.0438	-0.0261	0.0140
-2	-0.2520	0.1461	-0.0438	-0.0261	0.0140	-2	-0.1954	0.1393	-0.0532	-0.0210	0.0137
-1	-0.1954	0.1393	-0.0532	-0.0210	0.0137	-1	-0.1416	0.1393	-0.0595	-0.0155	0.0142
0	-0.1416	0.1393	-0.0595	-0.0100	0.0142	0	-0.0934	0.1393	-0.0589	-0.0100	0.0142
2	-0.0680	0.1393	-0.0470	-0.0048	0.0145	2	-0.0680	0.1393	-0.0470	-0.0048	0.0145
3	-0.0028	0.1393	-0.0501	.0007	0.0150	3	-0.0028	0.1393	-0.0501	.0007	0.0150
5	.0991	0.1461	-0.0520	.0127	0.0144	5	.0991	0.1461	-0.0520	.0127	0.0144
7	.2124	0.1603	-0.0564	.0251	0.0150	7	.2124	0.1603	-0.0564	.0251	0.0150
10	.3964	0.1951	-0.0720	.0436	.0189	10	.3964	0.1951	-0.0720	.0436	.0189
15	.6795	0.2993	-0.1190	.0732	.0339	15	.6795	0.2993	-0.1190	.0732	.0339
20	.9032	0.4524	-0.1753	.1003	.0524	20	.9032	0.4524	-0.1753	.1003	.0524
25	1.0618	0.6223	-0.2443	.1203	.0728	25	1.0618	0.6223	-0.2443	.1203	.0728

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TABLE 2 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 2 MODEL - Continued

 $\frac{t}{c} = 0.06$ $\frac{x_0}{c} = 0.80$

α , deg	c_L	c_D	c_H	c_l	c_n	α , deg	c_L	c_D	c_H	c_l	c_n
$H = 0.60$											
-10	-0.7599	0.1929	0.0832	-0.0823	0.0079	-10	-0.8703	0.2784	0.1309	-0.0944	0.0182
-7	-0.6085	0.1514	0.0372	-0.0688	0.0072	-7	-0.7199	0.2125	0.1026	-0.0788	0.0141
-5	-0.5047	0.1239	0.0372	-0.0592	0.0056	-5	-0.5823	0.1763	0.0778	-0.0637	0.0114
-3	-0.4066	0.1105	0.0372	-0.0490	0.0043	-3	-0.4640	0.1574	0.0658	-0.0493	0.0095
-2	-0.3645	0.1105	0.0372	-0.0442	0.0033	-2	-0.4000	0.1494	0.0708	-0.0431	0.0089
-1	-0.3253	0.1021	0.0559	-0.0395	0.0029	-1	-0.3552	0.1417	0.0708	-0.0380	0.0080
0	-0.2804	0.0965	0.0422	-0.0354	0.0026	0	-0.3040	0.1337	0.0708	-0.0322	0.0073
1	-0.2384	0.0965	0.0372	-0.0306	0.0026	1	-0.2528	0.1257	0.0680	-0.0268	0.0073
2	-0.1963	0.0880	0.0397	-0.0265	0.0029	2	-0.2048	0.1181	0.0680	-0.0210	0.0071
3	-0.1545	0.0880	0.0397	-0.0218	0.0026	3	-0.1344	0.1101	0.0637	-0.0148	0.0069
5	-0.0449	0.0965	0.0372	-0.0095	0.0033	5	0.0000	0.1133	0.0566	0.0008	0.0071
7	-0.0561	0.0937	0.0323	-0.0020	0.0029	7	0.1312	0.1213	0.0389	0.0136	0.0067
10	-0.2384	0.1352	0.0063	0.0224	0.0020	10	0.3712	0.1542	0.0000	0.0404	0.0085
15	-0.5300	0.2456	-0.0559	0.0579	0.0088	15	0.7039	0.2595	-0.0744	0.0792	0.0264
20	-0.6730	0.3449	-0.1328	0.0783	0.0192	20	0.8543	0.3619	-0.1628	0.0990	0.0411
25	-0.7010	0.4139	-0.1514	0.0803	0.0261	25	0.9439	0.4800	-0.2053	0.1087	0.0567
$H = 0.80$											
-10	-0.8277	0.2335	0.0882	-0.0908	0.0124	-10	-0.8215	0.2940	0.1200	-0.0885	0.0228
-7	-0.6739	0.1773	0.0714	-0.0756	0.0093	-7	-0.6744	0.2262	0.0949	-0.0722	0.0171
-5	-0.5600	0.1477	0.0630	-0.0631	0.0071	-5	-0.5579	0.1916	0.0780	-0.0603	0.0144
-3	-0.4556	0.1268	0.0671	-0.0516	0.0053	-3	-0.4445	0.1658	0.0644	-0.0469	0.0125
-2	-0.4157	0.1215	0.0756	-0.0465	0.0042	-2	-0.3832	0.1582	0.0611	-0.0394	0.0109
-1	-0.3702	0.1120	0.0706	-0.0415	0.0035	-1	-0.3127	0.1478	0.0542	-0.0331	0.0105
0	-0.3189	0.1082	0.0714	-0.0364	0.0031	0	-0.2636	0.1432	0.0542	-0.0279	0.0103
1	-0.2715	0.1025	0.0882	-0.0313	0.0029	1	-0.2023	0.1358	0.0509	-0.0212	0.0100
2	-0.2278	0.0972	0.0756	-0.0263	0.0029	2	-0.1533	0.1281	0.0475	-0.0164	0.0100
3	-0.1708	0.0934	0.0740	-0.0207	0.0040	3	-0.0920	0.1281	0.0509	-0.0101	0.0098
5	-0.0494	0.0915	0.0688	-0.0074	0.0040	5	0.0368	0.1312	0.0373	0.0052	0.0087
7	0.1328	0.2050	0.0630	0.0000	0.0000	7	0.1686	0.1358	0.0238	0.0182	0.0086
10	0.2828	0.1363	0.0336	0.0276	0.0035	10	0.4016	0.1735	-0.0169	0.0439	0.0109
15	0.5657	0.2335	-0.0545	0.0645	0.0152	15	0.7357	0.2863	-0.1010	0.0818	0.0292
20	0.7100	0.3174	-0.1301	0.0820	0.0269	20	0.9963	0.4371	-0.1763	0.1135	0.0521
25	0.7498	0.4051	-0.1554	0.0866	0.0373	25	1.1035	0.5729	-0.2474	0.1276	0.0704
$H = 0.65$											
-10	-0.8557	0.2403	0.0963	-0.0939	0.0168	-10	-0.7950	0.2824	0.1172	-0.0836	0.0228
-7	-0.6846	0.1840	0.0710	-0.0762	0.0130	-7	-0.6683	0.2244	0.0977	-0.0693	0.0181
-5	-0.5990	0.1579	0.0710	-0.0666	0.0112	-5	-0.5388	0.1840	0.0782	-0.0557	0.0151
-3	-0.4813	0.1387	0.0789	-0.0541	0.0085	-3	-0.4416	0.1593	0.0684	-0.0454	0.0130
-2	-0.4314	0.1280	0.0820	-0.0480	0.0075	-2	-0.3828	0.1519	0.0651	-0.0390	0.0118
-1	-0.3744	0.1191	0.0789	-0.0420	0.0066	-1	-0.3239	0.1449	0.0586	-0.0329	0.0118
0	-0.3351	0.1141	0.0789	-0.0363	0.0058	0	-0.2650	0.1375	0.0554	-0.0271	0.0120
1	-0.2852	0.1070	0.0749	-0.0312	0.0054	1	-0.2061	0.1304	0.0521	-0.0211	0.0120
2	-0.2318	0.1016	0.0820	-0.0255	0.0052	2	-0.1560	0.1290	0.0593	-0.0154	0.0120
3	-0.1783	0.0963	0.0749	-0.0199	0.0048	3	-0.0883	0.1245	0.0489	-0.0086	0.0110
5	-0.0499	0.0963	0.0710	-0.0061	0.0043	5	0.0471	0.1304	0.0358	0.0064	0.0113
7	0.0677	0.0998	0.0655	0.0056	0.0033	7	0.1825	0.1375	0.0228	0.0204	0.0101
10	0.2852	0.1351	0.0449	0.0290	0.0039	10	0.3945	0.1737	-0.0228	0.0422	0.0118
15	0.5419	0.2278	-0.0552	0.0662	0.0180	15	0.7096	0.2853	-0.1009	0.0783	0.0298
20	0.7309	0.3155	-0.1231	0.0835	0.0305	20	0.9716	0.4416	-0.1784	0.1093	0.0502
25	0.7844	0.4172	-0.1656	0.0904	0.0425	25	1.1355	0.6083	-0.2443	0.1301	0.0734
$H = 0.90$											
-10	-0.8745	0.2698	0.1117	-0.0955	0.0164	-10	-0.7642	0.2604	0.1096	-0.0804	0.0237
-7	-0.7097	0.1984	0.0856	-0.0784	0.0119	-7	-0.6368	0.2046	0.1002	-0.0354	0.0191
-5	-0.6054	0.1672	0.0782	-0.0661	0.0096	-5	-0.5264	0.1769	0.0782	-0.0553	0.0153
-3	-0.4776	0.1440	0.0744	-0.0522	0.0076	-3	-0.4246	0.1503	0.0688	-0.0436	0.0137
-2	-0.4238	0.1339	0.0818	-0.0461	0.0065	-2	-0.3679	0.1407	0.0688	-0.0374	0.0132
-1	-0.3801	0.1258	0.0792	-0.0408	0.0057	-1	-0.3142	0.1322	0.0626	-0.0323	0.0128
0	-0.3296	0.1241	0.0818	-0.0351	0.0053	0	-0.2661	0.1279	0.0626	-0.0264	0.0125
1	-0.2825	0.1157	0.0782	-0.0298	0.0051	1	-0.2038	0.1211	0.0564	-0.0206	0.0122
2	-0.2321	0.1076	0.0818	-0.0245	0.0051	2	-0.1500	0.1183	0.0564	-0.0148	0.0100
3	-0.1682	0.0992	0.0744	-0.0180	0.0053	3	-0.0708	0.1169	0.0470	-0.0065	0.0125
5	-0.0437	0.0992	0.0706	-0.0049	0.0057	5	0.0708	0.1226	0.0344	0.0079	0.0117
7	0.0975	0.1123	0.0558	0.0098	0.0049	7	0.1840	0.1322	0.0156	0.0192	0.0115
10	0.3195	0.1456	0.0223	0.0339	0.0061	10	0.3821	0.1741	-0.0814	0.0402	0.0150
15	0.6424	0.2365	-0.0521	0.0727	0.0227	15	0.6934	0.2895	-0.0983	0.0735	0.0309
20	0.7736	0.3310	-0.1450	0.0890	0.0344	20	0.9340	0.4455	-0.1722	0.1024	0.0520
25	0.8442	0.4383	-0.1785	0.0967	0.0479	25	1.1038	0.6153	-0.2348	0.1230	0.0739
$H = 1.00$											
-10	-0.7642	0.2604	0.1096	-0.0804	0.0237	-10	-0.7242	0.2424	0.1002	-0.0354	0.0191
-7	-0.5264	0.1769	0.0782	-0.0553	0.0153	-7	-0.4246	0.1503	0.0688	-0.0436	0.0137
-5	-0.4246	0.1503	0.0688	-0.0436	0.0137	-5	-0.3679	0.1407	0.0688	-0.0374	0.0132
-3	-0.3679	0.1407	0.0688	-0.0374	0.0132	-3	-0.3142	0.1322	0.0626	-0.0323	0.0128
-2	-0.3142	0.1322	0.0626	-0.0323	0.0128	-2	-0.2661	0.1279	0.0626	-0.0264	0.0125
-1	-0.2661	0.1279	0.0626	-0.0264	0.0125	-1	-0.2038	0.1211	0.0564	-0.0206	0.0122
0	-0.2038	0.1211	0.0564	-0.0206	0.0122	0	-0.1500	0.1183	0.0564	-0.0148	0.0100
1	-0.1500	0.1183	0.0564	-0.0148	0.0100	1	-0.0708	0.1169	0.0470	-0.0065	0.0125
2	-0.0708	0.1169	0.0470	-0.0065	0.0125	2	0.0708	0.1226	0.0344	0.0079	0.0117
3	0.0708	0.1226	0.0344	0.0079	0.0117	3	0.1840	0.1322	0.0156	0.0192	0.0115
5	0.1840	0.1322	0.0156	0.0192	0.0115	5	0.3821	0.1741	-0.0814	0.0402	0.0150
7	0.3821	0.1741	-0.0814	0.0402	0.0150	7	0.6934	0.2895	-0.0983	0.0735	0.0309
10	0.6934	0.2895	-0.0983	0.0735	0.0309	10	0.9340	0.4455	-0.1722	0.1024	0.0520
15	0.9340	0.4455	-0.1722	0.1024	0.0520	15	1.1038	0.6153	-0.2348	0.1230	0.0739

TABLE 2 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 2 MODEL, Concluded

 $\frac{t}{c} = 0.06$ $\frac{x_e}{c} = 1.00$

α deg	c_L	c_D	c_M	c_l	c_n	α deg	c_L	c_D	c_M	c_l	c_n
$M = 0.60$											
$M = 0.95$											
-10	-0.8664	0.1705	0.2287	-0.0984	0.0224	-10	-1.0169	0.2853	0.2997	-0.1118	0.0296
-7	-0.7015	0.1431	0.1793	-0.0800	0.0172	-7	-0.8257	0.2149	0.2469	-0.0894	0.0228
-5	-0.6009	0.1235	0.2039	-0.0679	0.0117	-5	-0.6663	0.1757	0.2080	-0.0716	0.0194
-3	-0.4779	0.1102	0.1670	-0.0570	0.0107	-3	-0.5228	0.1505	0.1868	-0.0573	0.0165
-2	-0.4416	0.1073	0.1719	-0.0522	0.0101	-2	-0.4750	0.1441	0.1974	-0.0507	0.0154
-1	-0.3857	0.1073	0.1730	-0.0475	0.0094	-1	-0.4272	0.1396	0.2010	-0.0453	0.0144
0	-0.3382	0.1073	0.1608	-0.0420	0.0091	0	-0.3762	0.1364	0.1940	-0.0402	0.0143
1	-0.2907	0.1045	0.1558	-0.0366	0.0088	1	-0.3188	0.1285	0.1868	-0.0344	0.0135
2	-0.2431	0.1045	0.1608	-0.0319	0.0084	2	-0.2710	0.1208	0.1868	-0.0286	0.0121
3	-0.1928	0.1017	0.1545	-0.0264	0.0075	3	-0.1976	0.1208	0.1798	-0.0209	0.0109
5	-0.0783	0.1045	0.1324	-0.0143	0.0075	5	-0.0765	0.1253	0.1728	-0.0077	0.0107
7	0.0224	0.0933	0.1384	-0.0020	0.0065	7	0.0765	0.1317	0.1480	0.0093	0.0098
10	0.1845	0.1347	0.1013	0.0190	0.0075	10	0.3124	0.1600	0.0847	0.0364	0.0128
15	0.4527	0.2554	0.0025	0.0536	0.0169	15	0.6408	0.2649	-0.0106	0.0743	0.0295
20	0.6540	0.3683	-0.1040	0.0800	0.0273	20	0.8320	0.3669	-0.1375	0.0975	0.0450
25	0.6540	0.4315	-0.1335	0.0800	0.0341	25	0.9468	0.4890	-0.2010	0.1107	0.0617
$M = 0.80$											
$M = 1.00$											
-10	-0.9214	0.2195	0.2343	-0.1038	0.0224	-10	-0.9743	0.2959	0.2006	-0.1060	0.0307
-7	-0.7511	0.1729	0.2051	-0.0826	0.0165	-7	-0.8215	0.2284	0.2655	-0.0882	0.0238
-5	-0.6319	0.1434	0.1925	-0.0698	0.0130	-5	-0.6841	0.1909	0.2398	-0.0738	0.0201
-3	-0.5222	0.1249	0.1892	-0.0574	0.0108	-3	-0.5772	0.1606	0.2195	-0.0600	0.0165
-2	-0.4616	0.1211	0.1892	-0.0537	0.0097	-2	-0.5100	0.1533	0.2195	-0.0526	0.0148
-1	-0.4200	0.1154	0.1916	-0.0464	0.0095	-1	-0.4520	0.1457	0.2128	-0.0463	0.0140
0	-0.3633	0.1135	0.1842	-0.0413	0.0092	0	-0.3787	0.1368	0.1992	-0.0404	0.0135
1	-0.3141	0.1059	0.1797	-0.0363	0.0086	1	-0.3329	0.1307	0.1992	-0.0345	0.0126
2	-0.2630	0.1059	0.1757	-0.0308	0.0081	2	-0.2718	0.1261	0.1992	-0.0278	0.0114
3	-0.2005	0.1022	0.1683	-0.0248	0.0077	3	-0.1955	0.1231	0.1925	-0.0215	0.0108
5	-0.0738	0.0969	0.1548	-0.0110	0.0077	5	-0.0428	0.1307	0.1690	-0.0045	0.0108
7	0.0435	0.1059	0.1465	0.0028	0.0066	7	0.0947	0.1307	0.1418	0.0111	0.0100
10	0.2270	0.1396	0.1131	0.0252	0.0081	10	0.3390	0.1683	0.0676	0.0385	0.0138
15	0.5033	0.2512	-0.0209	0.0602	0.0196	15	0.6872	0.2764	-0.0388	0.0778	0.0328
20	0.6887	0.3387	-0.1155	0.0836	0.0324	20	0.9254	0.4190	0.1148	0.1067	0.0550
25	0.7114	0.4132	-0.1339	0.0859	0.0414	25	1.0750	0.5769	0.2365	0.1253	0.0753
$M = 0.85$											
$M = 1.05$											
-10	-0.9630	0.2360	0.2398	-0.1082	0.0264	-10	-0.9354	0.2941	0.2951	-0.1018	0.0333
-7	-0.7604	0.1784	0.2004	-0.0845	0.0196	-7	-0.7947	0.2264	0.2692	-0.0843	0.0252
-5	-0.6361	0.1432	0.1886	-0.0707	0.0159	-5	-0.6715	0.1903	0.2400	-0.0719	0.0210
-3	-0.5188	0.1258	0.1848	-0.0578	0.0132	-3	-0.5396	0.1616	0.2238	-0.0569	0.0181
-2	-0.4765	0.1187	0.1886	-0.0522	0.0124	-2	-0.4956	0.1542	0.2238	-0.0513	0.0167
-1	-0.4229	0.1155	0.1848	-0.0470	0.0116	-1	-0.4369	0.1457	0.2141	-0.0455	0.0135
0	-0.3696	0.1102	0.1808	-0.0418	0.0109	0	-0.3783	0.1384	0.2141	-0.0391	0.0147
1	-0.3127	0.1066	0.1730	-0.0358	0.0099	1	-0.3050	0.1325	0.1946	-0.0328	0.0142
2	-0.2523	0.0995	0.1753	-0.0302	0.0095	2	-0.2375	0.1284	0.1881	-0.0249	0.0133
3	-0.1883	0.0995	0.1690	-0.0228	0.0089	3	-0.1730	0.1264	0.1849	-0.0182	0.0124
5	-0.0675	0.0959	0.1572	-0.0095	0.0081	5	-0.0176	0.1325	0.1525	-0.0025	0.0142
7	0.0465	0.1084	0.1494	0.0039	0.0074	7	0.1202	0.1384	0.1233	0.0135	0.0124
10	0.2487	0.1624	0.1116	0.0280	0.0112	10	0.3460	0.2912	0.0551	0.0391	0.0159
15	0.5366	0.2463	-0.0236	0.0642	0.0219	15	0.6627	0.2912	-0.0357	0.0747	0.0346
20	0.7249	0.3354	-0.1180	0.0871	0.0364	20	0.9266	0.4498	-0.1200	0.1061	0.0564
25	0.7569	0.4143	-0.1336	0.0906	0.0461	25	1.0879	0.6014	-0.2010	0.1256	0.0788
$M = 0.90$											
$M = 1.10$											
-10	-1.0016	0.2670	0.2630	-0.1114	0.0292	-10	-0.8999	0.2525	0.2777	-0.0985	0.0354
-7	-0.7839	0.1943	0.2089	-0.0862	0.0216	-7	-0.7588	0.2011	0.2496	-0.0801	0.0277
-5	-0.6499	0.1598	0.1963	-0.0703	0.0177	-5	-0.6150	0.1664	0.2309	-0.0681	0.0243
-3	-0.5293	0.1400	0.1853	-0.0569	0.0156	-3	-0.5247	0.1416	0.2153	-0.0561	0.0205
-2	-0.4757	0.1317	0.1904	-0.0504	0.0138	-2	-0.4767	0.1346	0.2153	-0.0500	0.0190
-1	-0.4154	0.1270	0.1889	-0.0455	0.0132	-1	-0.4062	0.1275	0.2059	-0.0428	0.0174
0	-0.3618	0.1186	0.1853	-0.0390	0.0117	0	-0.3498	0.1207	0.1997	-0.0373	0.0171
1	-0.2981	0.1119	0.1778	-0.0333	0.0113	1	-0.2793	0.1137	0.1872	-0.0305	0.0164
2	-0.2546	0.1105	0.1816	-0.0280	0.0103	2	-0.2116	0.1137	0.1778	-0.0226	0.0153
3	-0.1809	0.1038	0.1704	-0.0203	0.0093	3	-0.1523	0.1137	0.1653	-0.0168	0.0143
5	-0.0670	0.1022	0.1652	-0.0077	0.0088	5	-0.0085	0.1165	0.1404	-0.0014	0.0151
7	0.0569	0.1169	0.1482	0.0065	0.0080	7	0.1241	0.1346	0.1123	0.0140	0.0153
10	0.2613	0.1514	0.1037	0.0301	0.0103	10	0.3357	0.1763	0.0592	0.0363	0.0185
15	0.5728	0.2456	-0.0149	0.0691	0.0247	15	0.6403	0.2942	-0.0375	0.0715	0.0330
20	0.7604	0.3427	-0.1319	0.0898	0.0399	20	0.8914	0.4550	-0.1216	0.1066	0.0550
25	0.8241	0.4399	-0.1667	0.0959	0.0518	25	1.0607	0.6229	-0.1997	0.1215	0.0766

TABLE 3 - THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 3 MODEL

 $\frac{k}{c} = 0.04$ $\frac{x_b}{c} = \text{NONE}$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
$M = 0.95$											
-10	-0.5812	0.0807	-0.0185	-0.0719	0.0095	-10	-0.7513	0.1568	0.0668	-0.0914	0.0150
-7	-0.4373	0.0361	-0.0308	-0.0492	0.0181	-7	-0.5317	0.0880	0.0389	-0.0635	0.0077
-5	-0.2848	0.0191	-0.0245	-0.0332	0.0164	-5	-0.3691	0.0508	0.0063	-0.0434	0.0038
-3	-0.1496	0.0155	-0.0173	-0.0172	0.0152	-3	-0.2163	0.0288	0.0077	-0.0243	0.0020
-2	-0.0892	0.0155	-0.0106	-0.0099	0.0010	-2	-0.1317	0.0228	0.0042	-0.0141	0.0012
-1	-0.0259	0.0155	-0.0038	-0.0023	0.0010	-1	-0.0488	0.0208	0.0003	-0.0043	0.0009
0	0.0345	0.0163	0.0053	0.0052	0.0011	0	0.0455	0.0252	0.0008	0.0069	0.0015
1	0.0892	0.0191	0.0086	0.0122	0.0013	1	0.1252	0.0160	0.0077	0.0171	0.0020
2	0.1640	0.0283	0.0169	0.0212	0.0022	2	0.2114	0.0228	0.0086	0.0276	0.0028
3	0.2302	0.0368	0.0216	0.0291	0.0035	3	0.2976	0.0288	0.0026	0.0375	0.0044
5	0.3481	0.0601	-0.0049	0.0448	0.0053	5	0.4602	0.0528	-0.0205	0.0569	0.0086
7	0.4978	0.0926	0.0364	0.0526	0.0109	7	0.6147	0.0888	-0.0509	0.0760	0.0142
10	0.6359	0.1578	-0.0067	0.0847	0.0192	10	0.8391	0.1587	-0.0867	0.1023	0.0247
15	0.7366	0.2561	-0.0616	0.1007	0.0328						
20	0.7423	0.3382	-0.0788	0.1001	0.0425						
25	0.7510	0.4245	-0.0909	0.0998	0.0523						
$M = 0.80$											
$M = 1.00$											
-10	-0.6426	0.1105	-0.0190	-0.0786	0.0102	-10	-0.7227	0.1473	0.0804	-0.0842	0.0137
-7	-0.4609	0.0576	-0.0264	-0.0545	0.0045	-7	-0.5138	0.0826	0.0453	-0.0576	0.0064
-5	-0.3086	0.0326	-0.0283	-0.0363	0.0026	-5	-0.3854	0.0522	0.0273	-0.0423	0.0038
-3	-0.1582	0.0211	-0.0169	-0.0176	0.0012	-3	-0.2198	0.0282	0.0112	-0.0229	0.0020
-2	-0.0918	0.0183	-0.0103	-0.0101	0.0009	-2	-0.1346	0.0217	0.0047	-0.0128	0.0014
-1	-0.0273	0.0173	0.0015	-0.0024	0.0010	-1	-0.0526	0.0179	0.0013	-0.0034	0.0012
0	0.0430	0.0192	0.0071	0.0063	0.0009	0	0.0433	0.0190	-0.0014	0.0069	0.0014
1	0.1133	0.0250	0.0164	0.0140	0.0016	1	0.1377	0.0217	-0.0059	0.0178	0.0021
2	0.1856	0.0298	0.0230	0.0227	0.0025	2	0.2290	0.0266	-0.0116	0.0282	0.0034
3	0.2656	0.0365	0.0326	0.0322	0.0036	3	0.3095	0.0343	-0.0212	0.0372	0.0047
5	0.4121	0.0576	0.0403	0.0504	0.0071	5	0.4612	0.0579	-0.0361	0.0551	0.0082
7	0.5781	0.0941	0.0313	0.0703	0.0121	7	0.5943	0.0921	-0.0566	0.0723	0.0130
10	0.6817	0.1537	-0.0049	0.0871	0.0203	10	0.8140	0.1606	-0.0974	0.0977	0.0227
15	0.7578	0.2497	-0.0577	0.1031	0.0384						
20	0.7774	0.3353	-0.0893	0.1031	0.0424						
25	0.7930	0.4304	-0.0945	0.1051	0.0536						
$M = 0.85$											
$M = 1.05$											
-10	-0.6717	0.1224	-0.0039	-0.0829	0.0115	-10	-0.7084	0.1404	0.0801	-0.0798	0.0122
-7	-0.4905	0.0648	-0.0200	-0.0578	0.0055	-7	-0.5112	0.0797	0.0462	-0.0559	0.0057
-5	-0.3386	0.0369	-0.0257	-0.0385	0.0027	-5	-0.3796	0.0504	0.0304	-0.0405	0.0030
-3	-0.1684	0.0225	-0.0164	-0.0181	0.0014	-3	-0.2152	0.0301	0.0136	-0.0221	0.0008
-2	-0.0955	0.0198	-0.0074	-0.0100	0.0009	-2	-0.1255	0.0235	0.0055	-0.0115	0.0002
-1	-0.0238	0.0189	0.0005	-0.0015	0.0011	-1	-0.0478	0.0209	-0.0008	-0.0027	0.0002
0	0.0531	0.0198	0.0090	0.0078	0.0011	0	0.0389	0.0209	-0.0027	0.0070	-0.0001
1	0.1226	0.0243	0.0188	0.0152	0.0020	1	0.1285	0.0257	-0.0045	0.0163	0.0013
2	0.1940	0.0288	0.0302	0.0244	0.0027	2	0.2182	0.0283	-0.0146	0.0260	0.0024
3	0.2837	0.0360	0.0339	0.0348	0.0041	3	0.2929	0.0375	-0.0212	0.0357	0.0041
5	0.4484	0.0603	0.0302	0.0555	0.0076	5	0.4454	0.0614	-0.0391	0.0535	0.0070
7	0.5912	0.0945	0.0179	0.0737	0.0126	7	0.5769	0.0945	-0.0547	0.0695	0.0115
10	0.7486	0.1566	-0.0007	0.0966	0.0227	10	0.7712	0.1581	-0.0914	0.0931	0.0205
15	0.7852	0.2548	-0.0776	0.1037	0.0342						
20	0.8090	0.3466	-0.0992	0.1055	0.0438						
25	0.8218	0.4501	-0.1098	0.1077	0.0564						
$M = 0.90$											
$M = 1.10$											
-10	-0.7097	0.1385	0.0255	-0.0882	0.0140	-10	-0.7152	0.1485	0.0812	-0.0817	0.0124
-7	-0.5237	0.0749	-0.0002	-0.0531	0.0073	-7	-0.5125	0.0808	0.0484	-0.0559	0.0051
-5	-0.3773	0.0432	-0.0185	-0.0432	0.0036	-5	-0.3822	0.0523	0.0330	-0.0401	0.0023
-3	-0.2084	0.0241	-0.0182	-0.0226	0.0018	-3	-0.2230	0.0327	0.0128	-0.0223	0.0002
-2	-0.1240	0.0182	-0.0155	-0.0132	0.0013	-2	-0.1361	0.0260	0.0070	-0.0120	-0.0005
-1	-0.0465	0.0174	-0.0364	-0.0042	0.0012	-1	-0.0657	0.0239	0.0028	-0.0038	-0.0003
0	0.0465	0.0199	0.0084	0.0073	0.0013	0	0.0261	0.0239	0.0003	0.0067	-0.0003
1	0.1171	0.0220	0.0168	0.0153	0.0011	1	0.1100	0.0263	-0.0048	0.0155	0.0006
2	0.2033	0.0263	0.0262	0.0247	0.0029	2	0.1969	0.0334	-0.0107	0.0258	0.0018
3	0.2894	0.0339	0.0283	0.0352	0.0044	3	0.2722	0.0434	-0.0189	0.0346	0.0029
5	0.4617	0.0597	0.0085	0.0561	0.0082	5	0.4199	0.0691	-0.0352	0.0521	0.0058
7	0.6150	0.0941	-0.0117	0.0770	0.0138	7	0.5588	0.0993	-0.0528	0.0679	0.0104
10	0.7735	0.1555	-0.0272	0.0990	0.0236	10	0.7326	0.1627	-0.0846	0.0726	0.0187
15	0.8615	0.2618	-0.0906	0.1087	0.0377						
20	0.8820	0.3575	-0.1130	0.1108	0.0472						
25	0.8854	0.4693	-0.1254	0.1125	0.0566						

CONTINUED ON BACK

CONFIDENTIAL

TABLE 3 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 3 MODEL - Continued

$$\frac{x}{c} = 0.04 \quad \frac{x_b}{c} = 0.40$$

α , deg	C_L	C_D	C_H	C_I	C_n	α , deg	C_L	C_D	C_H	C_I	C_n
$M = 0.60$											
$M = 0.95$											
-10	-0.5242	0.1771	-0.0870	-0.0655	0.0235	-10	-0.6278	0.2697	-0.0673	-0.0722	0.0306
-7	-0.5443	0.1417	-0.1067	-0.0647	0.0180	-7	-0.5218	0.2206	-0.0793	-0.0581	0.0250
-5	-0.4525	0.1175	-0.1109	-0.0513	0.0147	-5	-0.4322	0.1884	-0.0903	-0.0487	0.0216
-3	-0.3456	0.0992	-0.1083	-0.0364	0.0127	-3	-0.3751	0.1644	-0.0881	-0.0391	0.0189
-2	-0.2880	0.0978	-0.0999	-0.0291	0.0120	-2	-0.3425	0.1604	-0.0907	-0.0355	0.0179
-1	-0.2419	0.0956	-0.0976	-0.0227	0.0118	-1	-0.3098	0.1443	-0.0879	-0.0313	0.0167
0	-0.1872	0.0956	-0.0941	-0.0154	0.0117	0	-0.2202	0.1443	-0.1019	-0.0198	0.0170
1	-0.1385	0.0971	-0.0885	-0.0096	0.0118	1	-0.1631	0.1403	-0.0942	-0.0140	0.0162
2	-0.0925	0.0985	-0.0869	-0.0032	0.0125	2	-0.0277	0.1443	-0.0927	0.0035	0.0173
3	-0.0435	0.1027	-0.0797	0.0023	0.0129	3	0.0897	0.1484	-0.0910	0.0168	0.0179
5	0.0547	0.1126	-0.0671	0.0143	0.0134	5	0.2283	0.1588	-0.0885	0.0341	0.0201
7	0.1584	0.1204	-0.0550	0.0268	0.0139	7	0.5545	0.1909	-0.0884	0.0712	0.0277
10	0.4810	0.1573	-0.0432	0.0632	0.0232						
15	0.7200	0.2393	-0.0452	0.0947	0.0373						
20	0.7719	0.3131	-0.0696	0.1002	0.0452						
25	0.7805	0.4080	-0.0669	0.1008	0.0557						
$M = 0.80$											
$M = 1.00$											
-10	-0.5676	0.2146	-0.0723	-0.0709	0.0253	-10	-0.5946	0.2697	-0.0503	-0.0675	0.0308
-7	-0.6596	0.1782	-0.1134	-0.0782	0.0206	-7	-0.4634	0.2188	-0.0808	-0.0506	0.0260
-5	-0.5930	0.1468	-0.1110	-0.0695	0.0174	-5	-0.3738	0.1937	-0.0983	-0.0391	0.0230
-3	-0.4736	0.1232	-0.1096	-0.0530	0.0146	-3	-0.2780	0.1747	-0.1111	-0.0276	0.0211
-2	-0.3953	0.1141	-0.1026	-0.0432	0.0137	-2	-0.2363	0.1709	-0.1154	-0.0219	0.0204
-1	-0.3366	0.1107	-0.0928	-0.0352	0.0132	-1	-0.1853	0.1595	-0.1204	-0.0169	0.0198
0	-0.2779	0.1092	-0.0864	-0.0277	0.0129	0	-0.1158	0.1633	-0.1282	-0.0075	0.0196
1	-0.2231	0.1083	-0.0811	-0.0208	0.0129	1	-0.0541	0.1602	-0.1315	0.0005	0.0197
2	-0.1585	0.1078	-0.0771	-0.0135	0.0128	2	0.0232	0.1656	-0.1259	0.0091	0.0201
3	-0.1076	0.1092	-0.0741	-0.0071	0.0132	3	0.0772	0.1687	-0.1291	0.0156	0.0206
5	0.0000	0.1155	-0.0631	0.0063	0.0139	5	0.1931	0.1808	-0.1289	0.0295	0.0222
7	0.1370	0.1222	-0.0539	0.0226	0.0146	7	0.3243	0.1952	-0.1240	0.0445	0.0248
10	0.4736	0.1492	-0.0441	0.0600	0.0229	10	0.5946	0.2241	-0.1040	0.0756	0.0307
15	0.6458	0.2334	-0.0271	0.0940	0.0322						
20	0.7965	0.3638	-0.0829	0.1029	0.0459						
25	0.8200	0.4187	-0.0947	0.1057	0.0573						
$M = 0.85$											
$M = 1.05$											
-10	-0.6336	0.2321	-0.1020	-0.0789	0.0269	-10	-0.5849	0.2642	-0.0458	-0.0659	0.0303
-7	-0.6574	0.1897	-0.0592	-0.0791	0.0222	-7	-0.4611	0.2143	-0.0763	-0.0498	0.0252
-5	-0.6427	0.1625	-0.0842	-0.0745	0.0187	-5	-0.3730	0.1908	-0.0919	-0.0380	0.0222
-3	-0.5271	0.1354	-0.0941	-0.0605	0.0157	-3	-0.2760	0.1761	-0.1054	-0.0269	0.0204
-2	-0.4499	0.1246	-0.1008	-0.0501	0.0146	-2	-0.2313	0.1688	-0.1132	-0.0214	0.0195
-1	-0.3746	0.1174	-0.0998	-0.0409	0.0140	-1	-0.1716	0.1651	-0.1165	-0.0151	0.0190
0	-0.3122	0.1147	-0.0885	-0.0319	0.0135	0	-0.1194	0.1614	-0.1220	-0.0072	0.0183
1	-0.2442	0.1129	-0.0826	-0.0236	0.0135	1	-0.0522	0.1614	-0.1271	0.0000	0.0186
2	-0.1763	0.1174	-0.0778	-0.0158	0.0133	2	0.0149	0.1651	-0.1248	0.0084	0.0188
3	-0.1212	0.1220	-0.0769	-0.0093	0.0135	3	0.0671	0.1688	-0.1254	0.0149	0.0192
5	0.0000	0.1219	-0.0697	0.0054	0.0145	5	0.1865	0.1812	-0.1279	0.0288	0.0204
7	0.1414	0.1264	-0.0603	0.0223	0.0153	7	0.3148	0.1982	-0.1163	0.0435	0.0230
10	0.4701	0.1517	-0.0512	0.0598	0.0229	10	0.5745	0.2238	-0.1008	0.0773	0.0291
15	0.7676	0.2420	-0.0589	0.0995	0.0375						
20	0.8301	0.3296	-0.0891	0.1066	0.0475						
25	0.8448	0.4308	-0.0988	0.1081	0.0582						
$M = 0.90$											
$M = 1.10$											
-10	-0.6501	0.2452	-0.0899	-0.0762	0.0276	-10	-0.5781	0.2524	-0.0457	-0.0645	0.0294
-7	-0.6363	0.2055	-0.0531	-0.0727	0.0231	-7	-0.4481	0.2097	-0.0711	-0.0490	0.0236
-5	-0.5968	0.1759	-0.0511	-0.0644	0.0196	-5	-0.3686	0.1862	-0.0871	-0.0380	0.0206
-3	-0.4987	0.1506	-0.0561	-0.0530	0.0167	-3	-0.2775	0.1706	-0.1020	-0.0270	0.0188
-2	-0.4437	0.1396	-0.0639	-0.0461	0.0154	-2	-0.2269	0.1649	-0.1050	-0.0210	0.0180
-1	-0.3784	0.1311	-0.0703	-0.0379	0.0146	-1	-0.1734	0.1599	-0.1110	-0.0143	0.0174
0	-0.3147	0.1268	-0.0678	-0.0292	0.0141	0	-0.1127	0.1592	-0.1173	-0.0073	0.0169
1	-0.2580	0.1243	-0.0634	-0.0223	0.0139	1	-0.0549	0.1564	-0.1260	0.0001	0.0167
2	-0.1892	0.1226	-0.0622	-0.0144	0.0136	2	0.0072	0.1607	-0.1263	0.0079	0.0167
3	-0.1273	0.1226	-0.0640	-0.0068	0.0139	3	0.0650	0.1670	-0.1216	0.0145	0.0171
5	0.0086	0.1277	-0.0706	0.0094	0.0147	5	0.1734	0.1812	-0.1222	0.0278	0.0183
7	0.1548	0.1353	-0.0653	0.0271	0.0156	7	0.3108	0.1990	-0.1128	0.0428	0.0215
10	0.4867	0.1607	-0.0641	0.0649	0.0232	10	0.5579	0.2239	-0.0943	0.0760	0.0274
15	0.7825	0.2495	-0.0672	0.1078	0.0372						

CONT

TABLE 3 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 3 MODEL a Continued

$$\frac{L}{c} = 0.04$$

$$\frac{x_b}{c} = 0.60$$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
-10	-.7631	.2179	-.0239	-.0957	.0280	-10	-.8526	.3018	-.0181	-.1039	.0362
-7	-.7003	.1631	-.0544	-.0835	.0215	-7	-.7008	.2343	-.0378	-.0859	.0290
-5	-.5716	.1335	-.0642	-.0679	.0171	-5	-.6007	.1985	-.0470	-.0725	.0246
-3	-.4573	.1159	-.0542	-.0523	.0139	-3	-.5490	.1628	-.0305	-.0647	.0202
-2	-.4059	.1089	-.0438	-.0460	.0127	-2	-.4683	.1509	-.0451	-.0559	.0190
-1	-.3630	.1040	-.0392	-.0405	.0120	-1	-.3940	.1389	-.0438	-.0477	.0173
0	-.3087	.1019	-.0335	-.0338	.0113	0	-.3036	.1389	-.0536	-.0359	.0169
1	-.2658	.0985	-.0683	-.0277	.0109	1	-.2422	.1310	-.0427	-.0294	.0159
2	-.2144	.0998	-.0224	-.0208	.0106	2	-.1615	.1310	-.0456	-.0180	.0159
3	-.1515	.1005	-.0148	-.0142	.0107	3	-.0807	.1350	-.0486	-.0108	.0159
5	-.0200	.1026	-.0012	.0012	.0107	5	-.0646	.1510	-.0413	-.0069	.0158
7	.1286	.1139	-.0038	.0188	.0111	7	.3036	.1485	-.0530	-.0343	.0202
10	.4574	.1602	-.0208	.0569	.0203	10	.6007	.1906	-.0624	-.0699	.0280
15	.6660	.2425	-.0422	.0867	.0334						
20	.7431	.3107	-.0668	.0948	.0422						
25	.7574	.4063	-.0802	.0963	.0530						
$M = 0.80$											
-10	-.8343	.2529	-.0572	-.1056	.0301	-10	-.7687	.2986	-.0315	-.0933	.0345
-7	-.7877	.1956	-.0614	-.0961	.0245	-7	-.5303	.2374	-.0532	-.0756	.0278
-5	-.6519	.1603	-.0670	-.0789	.0197	-5	-.5381	.2042	-.0631	-.0657	.0244
-3	-.5336	.1336	-.0528	-.0632	.0163	-3	-.4335	.1701	-.0724	-.0513	.0213
-2	-.4715	.1241	-.0399	-.0557	.0148	-2	-.3720	.1679	-.0756	-.0435	.0199
-1	-.4171	.1193	-.0294	-.0491	.0136	-1	-.3013	.1603	-.0813	-.0351	.0188
0	-.3589	.1145	-.0229	-.0424	.0126	0	-.2183	.1550	-.0814	-.0264	.0179
1	-.3104	.1097	-.0141	-.0353	.0122	1	-.1537	.1535	-.0830	-.0177	.0177
2	-.2522	.1050	-.0130	-.0283	.0118	2	-.0861	.1550	-.0794	-.0096	.0174
3	-.1804	.1050	-.0046	-.0200	.0115	3	-.0184	.1535	-.0764	-.0019	.0176
5	-.0388	.1030	-.0021	-.0035	.0114	5	.1353	.1565	-.0728	-.0155	.0177
7	.1555	.1097	-.0011	.0196	.0123	7	.3382	.1679	-.0695	-.0389	.0217
10	.4851	.1479	-.0239	.0581	.0208	10	.6149	.2056	-.0838	-.0715	.0293
15	.7082	.2338	-.0466	.0903	.0347						
20	.7664	.3130	-.0781	.0965	.0424						
25	.8149	.4055	-.0901	.0989	.0543						
$M = 0.85$											
-10	-.8460	.2657	-.0559	-.1078	.0318	-10	-.7421	.2919	-.0303	-.0913	.0257
-7	-.8187	.2102	-.0389	-.0994	.0256	-7	-.6234	.2321	-.0516	-.0739	.0265
-5	-.7277	.1745	-.0413	-.0876	.0212	-5	-.5313	.2007	-.0603	-.0624	.0227
-3	-.5731	.1432	-.0512	-.0684	.0174	-3	-.4304	.1752	-.0667	-.0498	.0198
-2	-.4949	.1324	-.0462	-.0589	.0156	-2	-.3681	.1679	-.0707	-.0420	.0183
-1	-.4457	.1253	-.0320	-.0515	.0144	-1	-.2968	.1598	-.0769	-.0339	.0171
0	-.3730	.1181	-.0225	-.0434	.0134	0	-.2226	.1533	-.0798	-.0255	.0160
1	-.3184	.1566	-.0167	-.0364	.0126	1	-.1603	.1533	-.0755	-.0174	.0160
2	-.2511	.1110	-.0137	-.0283	.0123	2	-.1039	.1496	-.0779	-.0099	.0154
3	-.1819	.1073	-.0113	-.0202	.0122	3	-.0148	.1467	-.0721	-.0012	.0158
5	-.0364	.1064	-.0033	-.0029	.0119	5	.1187	.1547	-.0642	.0150	.0159
7	.1383	.1163	-.0024	.0173	.0132	7	.3414	.1679	-.0635	.0390	.0206
10	.5003	.1521	-.0251	.0596	.0214	10	.5937	.2044	-.0812	.0690	.0280
15	.7368	.2416	-.0577	.0931	.0355						
20	.8005	.3221	-.0848	.1005	.0464						
25	.8278	.4268	-.0969	.1038	.0569						
$M = 0.90$											
-10	-.8665	.2736	-.0399	-.1084	.0337	-10	-.7191	.2773	-.0257	-.0887	.0307
-7	-.8425	.2172	-.0069	-.0987	.0273	-7	-.6040	.2207	-.0494	-.0719	.0242
-5	-.7258	.1810	-.0094	-.0876	.0228	-5	-.5264	.1945	-.0556	-.0617	.0208
-3	-.6060	.1482	-.0172	-.0741	.0187	-3	-.4314	.1698	-.0651	-.0486	.0178
-2	-.5409	.1347	-.0227	-.0658	.0169	-2	-.3595	.1627	-.0678	-.0413	.0163
-1	-.4622	.1262	-.0211	-.0557	.0154	-1	-.2963	.1542	-.0764	-.0332	.0153
0	-.3937	.1179	-.0104	-.0474	.0143	0	-.2244	.1486	-.0791	-.0253	.0145
1	-.3255	.1111	-.0091	-.0388	.0137	1	-.1668	.1478	-.0782	-.0180	.0141
2	-.2431	.1095	-.0113	-.0298	.0134	2	-.1035	.1471	-.0788	-.0102	.0140
3	-.1712	.1053	-.0155	-.0204	.0131	3	-.0374	.1471	-.0689	-.0023	.0141
5	.0000	.1053	-.0118	-.0003	.0131	5	.1151	.1549	-.0599	-.0157	.0145
7	.2054	.1179	-.0120	.0232	.0156	7	.3308	.1669	-.0594	-.0387	.0190
10	.5478	.1642	-.0293	.0627	.0244	10	.5695	.2023	-.0735	.0669	.0265
15	.8388	.2517	-.0721	.1018	.0388						
$M = 1.00$											
-10	-.7687	.2986	-.0315	-.0933	.0345	-10	-.7421	.2919	-.0303	-.0913	.0257
-7	-.6381	.2374	-.0532	-.0756	.0278	-7	-.6234	.2321	-.0516	-.0739	.0265
-5	-.5381	.2042	-.0631	-.0657	.0244	-5	-.5313	.2007	-.0603	-.0624	.0227
-3	-.4335	.1701	-.0724	-.0513	.0213	-3	-.4304	.1752	-.0667	-.0498	.0198
-2	-.3720	.1679	-.0756	-.0435	.0199	-2	-.3681	.1679	-.0707	-.0420	.0183
-1	-.3013	.1603	-.0813	-.0351	.0188	-1	-.2968	.1598	-.0769	-.0339	.0171
0	-.2183	.1550	-.0814	-.0264	.0179	0	-.2226	.1533	-.0798	-.0255	.0160
1	-.1537	.1535	-.0830	-.0177	.0177	1	-.1603	.1533	-.0755	-.0174	.0160
2	-.0861	.1550	-.0794	-.0096	.0174	2	-.1039	.1496	-.0779	-.0099	.0154
3	-.0184	.1535	-.0764	-.0019	.0176	3	-.0148	.1467	-.0721	-.0012	.0158
5	.1353	.1565	-.0728	.0155	.0177	5	.1187	.1547	-.0642	.0150	.0159
7	.3382	.1679	-.0695	.0389	.0217	7	.3414	.1679	-.0635	.0390	.0206
10	.6149	.2056	-.0838	.0715	.0293	10	.5937	.2044	-.0812	.0690	.0280
$M = 1.05$											
-10	-.7421	.2919	-.0303	-.0913	.0257	-10	-.7191	.2773	-.0257	-.0887	.0307
-7	-.6234	.2321	-.0516	-.0739	.0265	-7	-.6040	.2207	-.0494	-.0719	.0242
-5	-.5313	.2007	-.0603	-.0624	.0227	-5	-.5264	.1945	-.0556	-.0617	.0208
-3	-.4304	.1752	-.0667	-.0498	.0198	-3	-.4314	.1698	-.0651	-.0486	.0178
-2	-.3681	.1679	-.0707	-.0420	.0183	-2	-.3595	.1627	-.0678	-.0413	.0163
-1	-.2968	.1598	-.0769	-.0339	.0171	-1	-.2963	.1542	-.0764	-.0332	.0153
0	-.2226	.1533	-.0798	-.0255	.0160	0	-.2244	.1486	-.0791	-.0253	.0145
1	-.1603	.1533	-.0755	-.0174	.0160	1	-.1668	.1478	-.0782	-.0180	.0141
2	-.1039	.1496	-.0779	-.0099	.0154	2	-.1035	.1471	-.0788	-.0102	.0140
3	-.0148	.1467	-.0721	-.0012	.0158	3	-.0374	.1471	-.0689	-.0023	.0141
5	.1151	.1549	-.0599	.0157	.0145	5	.1151	.1549	-.0599	.0157	.0145
7	.3308	.1669	-.0594	.0387	.0190	7	.3308	.1669	-.0594	.0387	.0190
10	.5695	.2023	-.0735	.0669	.0265	10	.5695	.2023	-.0735	.0669	.0265

TABLE 3 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 3 MODEL - Continued

$$\frac{x}{c} = 0.04 \quad \frac{x_b}{c} = 0.80$$

α , deg	c_L	c_D	c_H	c_l	c_n		α , deg	c_L	c_D	c_H	c_l	c_n
$M = 0.60$												
-10	-.9410	.2847	.0580	-.1139	.0282		-7	-.8219	.2584	.0715	-.0945	.0281
-7	-.8070	.1816	.0197	-.0946	.0206		-5	-.7059	.2227	.0537	-.0795	.0240
-5	-.6501	.1494	.0178	-.0764	.0159		-3	-.4029	.1870	-.0017	-.0665	.0197
-3	-.5275	.1297	.0246	-.0606	.0131		-2	-.5286	.1688	.0444	-.0583	.0180
-2	-.4705	.1213	.0327	-.0534	.0118		-1	-.4319	.1632	.0396	-.0473	.0168
-1	-.4192	.1151	.0391	-.0470	.0108		0	-.3545	.1529	.0441	-.0388	.0155
0	-.3536	.1094	.0450	-.0398	.0097		1	-.2869	.1514	.0420	-.0310	.0150
1	-.2866	.1045	.0555	-.0332	.0092		2	-.2031	.1450	.0450	-.0199	.0145
2	-.2509	.1017	.0539	-.0268	.0090		3	-.1257	.1434	.0451	-.0108	.0144
3	-.1853	.0982	.0576	-.0185	.0086		5	-.0677	.1395	.0425	-.0104	.0144
5	-.0456	.0940	.0654	-.0029	.0086		7	.3062	.1570	.0150	-.0368	.0186
7	.1141	.1017	.0727	.0159	.0095		10	.5995	.2029	-.0250	.0724	.0275
10	.4106	.1500	.0257	.0508	.0179							
15	.6587	.2454	-.0315	.0880	.0328							
20	.7528	.3155	-.0730	.0975	.0421							
25	.7585	.3982	-.0807	.0969	.0511							
$M = 0.80$												
-10	-.0150	.2705	.0452	-.1207	.0307		-7	-.7666	.2564	.0645	-.0881	.0260
-7	-.8871	.2048	.0341	.1038	.0239		-5	-.6716	.2179	.0511	-.0757	.0214
-5	-.7089	.1648	.0286	.0823	.0188		-3	-.5642	.1855	.0436	-.0620	.0186
-3	-.5733	.1400	.0373	-.0666	.0154		-2	-.4876	.1742	.0407	-.0533	.0170
-2	-.4959	.1276	.0468	-.0576	.0136		-1	-.4109	.1659	.0398	-.0447	.0156
-1	-.4416	.1191	.0546	-.0505	.0127		0	-.3342	.1591	.0390	-.0357	.0146
0	-.3874	.1095	.0604	-.0431	.0114		1	-.2729	.1523	.0421	-.0273	.0140
1	-.3138	.1038	.0672	-.0353	.0106		2	-.1809	.1463	.0375	-.0171	.0137
2	-.2479	.1010	.0717	-.0274	.0103		3	-.0889	.1455	.0415	-.0078	.0141
3	-.1666	.0943	.0704	-.0176	.0097		5	.1104	.1493	.0307	.0152	.0149
5	-.0155	.0905	.0779	.0000	.0099		7	.3287	.1629	.0047	.0403	.0192
7	.1472	.1019	.0793	.0184	.0110		10	.5857	.2081	-.0387	.0710	.0273
10	.4997	.1952	.0104	.0607	.0203							
15	.7206	.2382	-.0512	.0921	.0343							
20	.8213	.3134	-.0950	.1019	.0421							
25	.8407	.4077	-.0986	.1019	.0535							
$M = 0.85$												
-7	-.9293	.2160	.0641	-.1045	.0246		-7	-.7670	.2519	.0670	-.0905	.0251
-5	-.7514	.1723	.0614	-.0874	.0202		-5	-.6782	.2119	.0535	-.0779	.0209
-3	-.5990	.1428	.0415	-.0698	.0167		-3	-.5449	.1828	.0463	-.0629	.0174
-2	-.5119	.1321	.0498	-.0587	.0141		-2	-.4709	.1711	.0413	-.0545	.0156
-1	-.4465	.1223	.0569	-.0510	.0132		-1	-.3968	.1610	.0405	-.0458	.0143
0	-.3848	.1134	.0621	-.0426	.0121		0	-.3258	.1544	.0405	-.0374	.0136
1	-.3086	.1089	.0641	-.0349	.0113		1	-.2636	.1500	.0406	-.0294	.0131
2	-.2396	.1036	.0685	-.0257	.0109		2	-.1895	.1427	.0380	-.0195	.0124
3	-.1561	.0973	.0688	-.0158	.0102		3	-.0977	.1405	.0451	-.0096	.0128
5	.0036	.0955	.0748	.0029	.0106		5	.1155	.1493	.0314	.0141	.0147
7	.1888	.1089	.0768	.0231	.0127		7	.3287	.1617	.0036	.0380	.0188
10	.5082	.1545	.0303	.0595	.0211		10	.5627	.2083	-.0362	.0671	.0258
15	.7587	.2499	-.0594	.0991	.0378							
20	.8422	.3365	-.0972	.1065	.0484							
25	.8531	.4312	-.1084	.1083	.0558							
$M = 0.90$												
-7	-.9089	.2285	.0946	-.1044	.0253		-7	-.7430	.2405	.0687	-.0882	.0232
-5	-.7927	.1873	.0797	-.0892	.0210		-5	-.6569	.2017	.0530	-.0754	.0195
-3	-.6253	.1571	.0529	-.0708	.0174		-3	-.5422	.1756	.0464	-.0615	.0160
-2	-.5364	.1437	.0498	-.0598	.0159		-2	-.4676	.1629	.0417	-.0537	.0145
-1	-.4578	.1344	.0617	-.0515	.0146		-1	-.3873	.1559	.0420	-.0450	.0132
0	-.3861	.1252	.0630	-.0425	.0134		0	-.3270	.1488	.0421	-.0374	.0123
1	-.3143	.1193	.0625	-.0332	.0129		1	-.2553	.1418	.0414	-.0290	.0118
2	-.2187	.1202	.0598	-.0225	.0129		2	-.1836	.1368	.0407	-.0189	.0115
3	-.1298	.1075	.0631	-.0128	.0116		3	-.0688	.1383	.0431	-.0081	.0120
5	.0444	.1075	.0660	.0069	.0114		5	.1176	.1453	.0329	.0151	.0136
7	.2563	.1235	.0516	.0311	.0149		7	.3184	.1609	.0073	.0374	.0174
10	.5774	.1748	.0099	.0698	.0248		10	.5336	.2109	-.0315	.0656	.0237
15	.8405	.2663	-.0690	.1071	.0406							
20	.8918	.3554	-.1114	.1123	.0497							
25	.8713	.4486	-.1187	.1123	.0571							
$M = 1.00$												
$M = 1.05$												
-7	-.9293	.2160	.0641	-.1045	.0246		-7	-.7666	.2564	.0645	-.0881	.0260
-5	-.7514	.1723	.0614	-.0874	.0202		-5	-.6716	.2179	.0511	-.0757	.0214
-3	-.5990	.1428	.0415	-.0698	.0167		-3	-.5449	.1855	.0436	-.0620	.0186
-2	-.5119	.1321	.0498	-.0587	.0141		-2	-.4876	.1742	.0407	-.0533	.0170
-1	-.4465	.1223	.0569	-.0510	.0132		-1	-.4109	.1659	.0398	-.0447	.0156
0	-.3848	.1134	.0621	-.0426	.0121		0	-.3342	.1591	.0390	-.0357	.0146
1	-.3086	.1089	.0641	-.0349	.0113		1	-.2729	.1523	.0421	-.0273	.0140
2	-.2396	.1036	.0685	-.0257	.0109		2	-.1809	.1463	.0375	-.0171	.0137
3	-.1561	.0973	.0688	-.0158	.0102		3	-.0889	.1455	.0415	-.0078	.0141
5	.0036	.0955	.0748	.0029	.0106		5	.1104	.1493	.0307	.0152	.0149
7	.1888	.1089	.0768	.0231	.0127		7	.3287	.1617	.0036	.0380	.0188
10	.5082	.1545	.0303	.0595	.0211		10	.5627	.2083	-.0362	.0671	.0258
15	.7587	.2499	-.0594	.0991	.0378							
20	.8422	.3365	-.0972	.1065	.0484							
25	.8531	.4312	-.1084	.1083	.0558							
$M = 1.10$												
-7	-.9089	.2285	.0946	-.1044	.0253		-7	-.7430	.2405	.0687	-.0882	.0232
-5	-.7927	.1873	.0797	-.0892	.0210		-5	-.6569	.2017	.0530	-.0754	.0195
-3	-.6253	.1571	.0529	-.0708	.0174		-3	-.5422	.1756	.0464	-.0615	.0160
-2	-.5364	.1437	.0498	-.0598	.0159		-2	-.4676	.1629	.0417	-.0537	.0145
-1	-.4578	.1344	.0617	-.0515	.0146		-1	-.3873	.1559	.0420	-.0450	.0132
0												

TABLE 3 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 3 MODEL - Continued

$$\frac{k}{c} = 0.04$$

$$\frac{x_s}{c} = 1.00$$

α , deg	c_L	c_D	c_M	c_l	c_n	α , deg	c_L	c_D	c_M	c_l	c_n
$M = 0.60$											
$M = 0.95$											
-10	-1.1630	.3107	.1966	-.1359	.0352	-5	-.8932	.2261	.2290	-.1025	.0240
-7	-1.0194	.2224	.1565	-.1162	.0253	-3	-.7308	.1853	.2112	-.0834	.0203
-5	-.8816	.1766	.1579	-.0982	.0192	-2	-.6431	.1717	.2048	-.0736	.0185
-3	-.7322	.1469	.1704	-.0813	.0152	-1	-.5521	.1582	.2038	-.0641	.0172
-2	-.6604	.1398	.1769	-.0732	.0139	0	-.4612	.1478	.1995	-.0542	.0160
-1	-.5944	.1307	.1750	-.0653	.0132	1	-.3897	.1374	.1990	-.0460	.0150
0	-.5312	.1229	.1785	-.0575	.0118	2	-.2631	.1278	.1881	-.0328	.0139
1	-.4594	.1159	.1779	-.0500	.0111	3	-.1624	.1238	.1781	-.0217	.0137
2	-.3877	.1094	.1832	-.0418	.0103	5	.0747	.1262	.1471	-.0033	.0149
3	-.2900	.0989	.1684	-.0305	.0093	7	.3215	.1334	.0935	-.0315	.0173
5	-.1149	.0910	.1576	-.0110	.0089	10	.6333	.1901	.0199	-.0716	.0268
7	.0804	.0961	.1411	-.0160	-.0038	15	.9581	.3075	-.0479	.1143	.0445
10	.4020	.1447	.0674	.0502	.0171						
15	.6863	.2436	-.0267	.0894	.0324						
20	.7897	.3233	-.0880	.1043	.0419						
25	.7897	.4123	-.0995	.1040	.0519						
$M = 0.80$											
$M = 1.00$											
-7	-1.0721	.2421	.1818	-.1234	.0258	-5	-.8585	.2263	.2315	-.0974	.0237
-5	-.8967	.1917	.1723	-.1025	.0206	-3	-.7041	.1823	.2166	-.0796	.0198
-3	-.7212	.1557	.1726	-.0836	.0169	-2	-.6176	.1686	.2113	-.0712	.0178
-2	-.5433	.1438	.1822	-.0741	.0151	-1	-.5342	.1542	.2025	-.0618	.0165
-1	-.5653	.1327	.1823	-.0655	.0138	0	-.4478	.1405	.2037	-.0515	.0152
0	-.4873	.1222	.1811	-.0568	.0128	1	-.3489	.1306	.1998	-.0412	.0137
1	-.4093	.1140	.1832	-.0485	.0119	2	-.2409	.1238	.1872	-.0300	.0131
2	-.3236	.1059	.1797	-.0390	.0110	3	-.1390	.1200	.1770	-.0194	.0131
3	-.2144	.0959	.1654	-.0272	.0099	5	.1173	.1250	.1290	-.0087	.0146
5	-.0390	.0910	.1333	-.0075	.0102	7	.3613	.1443	.0716	-.0369	.0189
7	.1559	.1007	.1468	.0142	.0111	10	.6330	.1974	.0072	-.0709	.0269
10	.5068	.1442	.0414	.0564	.0195						
15	.7602	.2474	-.0541	.0934	.0340						
20	.8499	.3307	-.1067	.1045	.0431						
25	.8382	.4238	-.1091	.1045	.0535						
$M = 0.85$											
$M = 1.05$											
-5	-.9026	.1963	.1824	-.1050	.0207	-5	-.8198	.2177	.2295	-.0938	.0225
-3	-.7163	.1537	.1720	-.0828	.0174	-3	-.6708	.1760	.2098	-.0763	.0187
-2	-.6359	.1415	.1790	-.0735	.0156	-2	-.5903	.1598	.2086	-.0669	.0167
-1	-.5482	.1303	.1823	-.0643	.0140	-1	-.5068	.1466	.2048	-.0579	.0151
0	-.4751	.1204	.1819	-.0562	.0129	0	-.4204	.1356	.1999	-.0488	.0138
1	-.4020	.1124	.1833	-.0473	.0120	1	-.3279	.1261	.1922	-.0391	.0126
2	-.2924	.1033	.1757	-.0366	.0108	2	-.2176	.1210	.1831	-.0274	.0122
3	-.1973	.0939	.1681	-.0248	.0097	3	-.0954	.1173	.1637	-.0145	.0124
5	.0000	.0921	.1607	-.0041	.0106	5	.1431	.1246	.1154	.1018	.0141
7	.2193	.1078	.1383	.0207	.0122	7	.3518	.1429	.0670	.0359	.0176
10	.5299	.1469	.0627	.0588	.0207	10	.6022	.1943	.0061	.0672	.0242
15	.8040	.2561	-.0642	.0976	.0354						
$M = 0.90$											
$M = 1.10$											
-5	-.9703	.2094	.2207	-.1068	.0226	-5	-.7858	.2096	.2243	-.0900	.0210
-3	-.7225	.1713	.1844	-.0842	.0188	-3	-.6211	.1740	.2053	-.0739	.0175
-2	-.6365	.1566	.1830	-.0741	.0175	-2	-.5720	.1563	.2062	-.0649	.0157
-1	-.5505	.1460	.1870	-.0644	.0163	-1	-.4882	.1421	.2025	-.0561	.0143
0	-.4645	.1354	.1863	-.0550	.0148	0	-.4044	.1314	.1989	-.0462	.0129
1	-.3854	.1269	.1861	-.0470	.0139	1	-.3033	.1222	.1891	-.0359	.0120
2	-.2753	.1151	.1748	-.0345	.0123	2	-.1849	.1172	.1730	-.0234	.0118
3	-.1755	.1058	.1685	-.0240	.0121	3	-.0664	.1172	.1537	-.0111	.0120
5	.0310	.1037	.1589	-.0014	.0123	5	.1444	.1243	.1091	.0151	.0133
7	.2753	.1206	.1183	.0268	.0146	7	.3467	.1421	.0634	.0359	.0171
10	.5987	.1671	.0484	.0665	.0235	10	.5806	.1918	.0069	.0663	.0231
15	.8602	.2665	-.0717	.1030	.0373						

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TABLE 3 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 3 MODEL :- Continued
 $\frac{x}{c} = 0.06$ $\frac{x_2}{c} = \text{NONE}$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$						$M = 0.95$					
$M = 0.80$						$M = 1.00$					
$M = 0.85$						$M = 1.05$					
$M = 0.90$						$M = 1.10$					
-10	-0.5757	0.0969	0.0288	-0.0655	0.0025	-10	-0.6463	0.1396	0.0750	-0.0771	0.0089
-5	-0.2823	0.0357	-0.0165	-0.0322	-0.0006	-5	-0.4556	0.0792	0.0281	-0.0528	0.0023
-3	-0.1653	0.019	-0.0156	-0.0186	-0.0010	-3	-0.3178	0.0532	0.0047	-0.0360	-0.0002
-2	-0.1040	0.0282	0.0707	-0.0114	-0.0014	-2	-0.1801	0.0375	-0.0047	-0.0202	-0.0013
-1	-0.0464	0.0282	-0.0114	-0.0054	-0.0010	-1	-0.1144	0.022	-0.0047	-0.0123	-0.0015
0	0.0093	0.0301	-0.0049	0.0015	-0.0007	0	0.0212	0.0343	-0.0024	0.0038	-0.0015
1	0.0687	0.0331	-0.0091	0.0078	-0.0007	1	0.0848	0.0343	-0.0024	0.0111	-0.0018
2	0.1226	0.0345	-0.0065	0.0141	-0.0007	2	0.1483	0.0375	-0.0024	0.0280	-0.0013
3	0.1783	0.0412	-0.0082	0.0207	-0.0006	3	0.2140	0.0428	-0.0033	0.0261	0.0002
5	0.2915	0.0565	-0.0033	0.0346	-0.0003	5	0.3496	0.0636	-0.0024	0.0429	0.0038
7	0.4160	0.0850	-0.0049	0.0487	0.0016	7	0.4873	0.0949	-0.0281	0.0600	0.0079
10	0.5664	0.1471	-0.0305	0.0685	0.0109	10	0.6632	0.1521	-0.0750	0.0826	0.0163
15	0.6592	0.2466	-0.0986	0.0850	0.0243	15	0.9217	0.2824	-0.1289	0.1162	0.0351
20	0.6778	0.3268	-0.1315	0.0868	0.0338	20	0.9323	0.3918	-0.1945	0.1131	0.0470
25	0.6741	0.3981	-0.1445	0.0856	0.0419	25	0.9662	0.5064	-0.2156	0.1166	0.0609
$M = 0.80$						$M = 1.00$					
$M = 0.85$						$M = 1.05$					
$M = 0.90$						$M = 1.10$					

TABLE 3 .- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 3 MODEL - Continued

$$\frac{t}{\sigma} = 0.06 \quad \frac{x_s}{c} = 0.40$$

α_2 deg	c_L	c_D	c_M	c_i	c_n	α_2 deg	c_L	c_D	c_M	c_i	c_n
$M = 0.60$											
-10	-0.5367	0.1898	-0.0493	-0.0646	0.0138	-10	-0.5810	0.2608	-0.0445	-0.0724	0.0238
-7	-0.5181	0.1571	-0.0698	-0.0604	0.0105	-7	-0.5492	0.2241	-0.0375	-0.0660	0.0194
-5	-0.4345	0.1359	-0.0731	-0.0502	0.0083	-5	-0.5089	0.2002	-0.0304	-0.0599	0.0161
-3	-0.3324	0.1233	-0.0813	-0.0382	0.0072	-3	-0.4431	0.1773	-0.0352	-0.0511	0.0133
-2	-0.2990	0.1207	-0.0740	-0.0315	0.0069	-2	-0.4007	0.1647	-0.0375	-0.0453	0.0133
-1	-0.2507	0.1196	-0.0780	-0.0258	0.0068	-1	-0.3371	0.1565	-0.0422	-0.0372	0.0131
0	-0.2080	0.1196	-0.0764	-0.0201	0.0072	0	-0.2629	0.1565	-0.0539	-0.0283	0.0123
1	-0.1653	0.1207	-0.0796	-0.0153	0.0076	1	-0.1993	0.1512	-0.0563	-0.0214	0.0127
2	-0.1207	0.1233	-0.0657	-0.0099	0.0082	2	-0.1463	0.1533	-0.0586	-0.0149	0.0123
3	-0.0817	0.1252	-0.0740	-0.0057	0.0083	3	-0.0912	0.1533	-0.0634	-0.0087	0.0130
5	0.0000	0.1370	-0.0698	0.0045	0.0097	5	0.0127	0.1565	-0.0704	0.0034	0.0131
7	0.0817	0.1415	-0.0533	0.0147	0.0094	7	0.1293	0.1616	-0.0704	0.0170	0.0138
10	0.3454	0.1690	-0.0624	0.0436	0.0104	10	0.4368	0.2033	-0.1079	0.0523	0.0215
15	0.6202	0.2559	-0.0863	0.0781	0.0240	15	0.7803	0.2712	-0.1407	0.0944	0.0350
20	0.6759	0.3242	-0.1150	0.0859	0.0324	20	0.9138	0.3806	-0.1759	0.1122	0.0510
25	0.6834	0.4000	-0.1331	0.0871	0.0400	25	0.9350	0.4849	-0.2063	0.1149	0.0598
$M = 0.80$											
-10	-0.5833	0.2225	-0.0501	-0.0712	0.0178	-10	-0.5808	0.2847	-0.0135	-0.0680	0.0257
-7	-0.5695	0.0606	-0.0651	-0.0686	0.0132	-7	-0.4650	0.2396	-0.0494	-0.0526	0.0208
-5	-0.5519	0.1584	-0.0584	-0.0641	0.0105	-5	-0.3838	0.2146	-0.0674	-0.0425	0.0189
-3	-0.4613	0.1385	-0.0584	-0.0523	0.0084	-3	-0.2883	0.1947	-0.0831	-0.0317	0.0176
-2	-0.4048	0.1322	-0.0573	-0.0448	0.0079	-2	-0.2396	0.1848	-0.0854	-0.0258	0.0167
-1	-0.3507	0.1285	-0.0556	-0.0378	0.0083	-1	-0.1767	0.1848	-0.0966	-0.0181	0.0161
0	-0.3004	0.1285	-0.0550	-0.0315	0.0088	0	-0.1097	0.1848	-0.1056	-0.0100	0.0164
1	-0.2451	0.1262	-0.0523	-0.0248	0.0088	1	-0.0467	0.1848	-0.1123	-0.0028	0.0170
2	-0.2011	0.1262	-0.0501	-0.0193	0.0088	3	0.0629	0.1897	-0.0966	0.0108	0.0173
3	-0.1458	0.1275	-0.0506	-0.0132	0.0091	5	0.1645	0.2008	-0.1280	0.0222	0.0195
5	-0.0515	0.1322	-0.0484	-0.0028	0.0099	7	0.2721	0.2098	-0.1325	0.0345	0.0216
7	0.0578	0.1360	-0.0373	0.0104	0.0110	10	0.4833	0.2248	-0.1348	0.0575	0.0261
10	0.3407	0.1571	-0.0584	0.0425	0.0143	15	0.8407	0.3145	-0.1774	0.1005	0.0409
15	0.6461	0.2348	-0.0840	0.0797	0.0300	20	1.0803	0.4644	-0.2381	0.1304	0.0622
20	0.7316	0.3153	-0.1235	0.0891	0.0393	25	1.1615	0.5931	-0.2695	0.1406	0.0793
$M = 0.85$											
-10	-0.6070	0.2265	-0.0679	-0.0755	0.0209	-10	-0.5734	0.2781	-0.0108	-0.0650	0.0265
-7	-0.5763	0.1906	-0.0580	-0.0698	0.0163	-7	-0.4525	0.2301	-0.0445	-0.0505	0.0215
-5	-0.5668	0.1684	-0.0444	-0.0663	0.0126	-5	-0.3686	0.2110	-0.0626	-0.0399	0.0189
-3	-0.5125	0.1464	-0.0444	-0.0577	0.0114	-3	-0.2769	0.1919	-0.0798	-0.0289	0.0178
-2	-0.4464	0.1393	-0.0470	-0.0491	0.0104	-2	-0.2262	0.1870	-0.0863	-0.0230	0.0168
-1	-0.3873	0.1337	-0.0418	-0.0422	0.0101	-1	-0.1697	0.1851	-0.0949	-0.0163	0.0165
0	-0.3283	0.1337	-0.0444	-0.0348	0.0098	0	-0.1092	0.1804	-0.1014	-0.0095	0.0166
1	-0.2716	0.1313	-0.0444	-0.0277	0.0096	1	-0.0488	0.1822	-0.1100	-0.0027	0.0174
2	-0.2220	0.1313	-0.0444	-0.0216	0.0096	2	0.0117	0.1851	-0.1122	0.0044	0.0181
3	-0.1701	0.1313	-0.0470	-0.0157	0.0100	3	0.0624	0.1919	-0.1187	0.0107	0.0183
5	-0.0590	0.1370	-0.0502	-0.0029	0.0106	5	0.1521	0.2015	-0.1272	0.0219	0.0203
7	0.0614	0.1393	-0.0486	0.0111	0.0116	7	0.2730	0.2149	-0.1337	0.0338	0.0222
10	0.3425	0.1616	-0.0627	0.0424	0.0148	10	0.4895	0.2379	-0.1337	0.0576	0.0275
15	0.6755	0.2428	-0.0956	0.0831	0.0309	15	0.8269	0.3214	-0.1812	0.0982	0.0413
20	0.7700	0.3252	-0.1322	0.0932	0.0206	20	1.0571	0.4632	-0.2390	0.1272	0.0612
25	0.8007	0.4204	-0.1604	0.0971	0.0267	25	1.2131	0.6426	-0.2908	0.1477	0.0871
$M = 0.90$											
-10	-0.5793	0.2411	-0.0641	-0.0734	0.0223	-10	-0.5478	0.2612	-0.0125	-0.0622	0.0263
-7	-0.5548	0.2028	-0.0542	-0.0692	0.0187	-7	-0.4334	0.2195	-0.0415	-0.0481	0.0215
-5	-0.5481	0.1807	-0.0370	-0.0660	0.0156	-5	-0.3527	0.2002	-0.0594	-0.0382	0.0192
-3	-0.5258	0.1589	-0.0222	-0.0613	0.0137	-3	-0.2664	0.1863	-0.0747	-0.0276	0.0182
-2	-0.4768	0.1479	-0.0222	-0.0546	0.0124	-2	-0.2176	0.1799	-0.0822	-0.0219	0.0172
-1	-0.3921	0.1424	-0.0271	-0.0463	0.0117	-1	-0.1576	0.1752	-0.0930	-0.0158	0.0170
0	-0.3454	0.1404	-0.0271	-0.0382	0.0111	0	-0.0976	0.1745	-0.1009	-0.0091	0.0174
1	-0.2896	0.0285	-0.0276	-0.0315	0.0104	1	-0.0488	0.1745	-0.1083	-0.0030	0.0180
2	-0.2429	0.1370	-0.0281	-0.0260	0.0100	2	-0.0019	0.1780	-0.1079	0.0030	0.0186
3	-0.1827	0.1315	-0.0320	-0.0189	0.0098	3	0.0982	0.1827	-0.1145	0.0096	0.0189
5	-0.0646	0.1393	-0.0419	-0.0054	0.0111	5	0.1576	0.1957	-0.1229	0.0206	0.0208
7	0.0691	0.1446	-0.0592	0.0110	0.0117	7	0.2552	0.2084	-0.1250	0.0319	0.0225
10	0.3587	0.1676	-0.0740	0.0442	0.0164	10	0.4709	0.2353	-0.1266	0.0549	0.0276
15	0.7219	0.2466	-0.1109	0.0871	0.0320	15	0.7899	0.3184	-0.1764	0.0465	0.0409
20	0.8155	0.3407	-0.1526	0.0995	0.0437	20	1.0244	0.4614	-0.2324	0.0607	0.0602
25	0.8489	0.4438	-0.1798	-0.1028	0.0553	25	1.1745	0.6403	-0.2856	0.0706	0.0826
$M = 0.95$											
-10	-0.5810	0.2608	-0.0445	-0.0724	0.0238	-10	-0.5478	0.2612	-0.0125	-0.0622	0.0263
-7	-0.5492	0.2241	-0.0375	-0.0660	0.0194	-7	-0.4502	0.2395	-0.0494	-0.0526	0.0208
-5	-0.5089	0.2002	-0.0304	-0.0599	0.0161	-5	-0.3688	0.2146	-0.0674	-0.0425	0.0189
-3	-0.4431	0.1773	-0.0352	-0.0511	0.0133	-3	-0.2883	0.1947	-0.0831	-0.0317	0.0176
-2	-0.4007	0.1647	-0.0375	-0.0453	0.0133	-2	-0.2396	0.1848	-0.0854	-0.0258	0.0167
-1	-0.3371	0.1565	-0.0422	-0.0372	0.0131	-1	-0.1767	0.1848	-0.0966	-0.0181	0.0161
0	-0.2629	0.1565	-0.0539	-0.0283	0.0123	0	-0.1097	0.1848	-0.1056	-0.0100	0.0164
1	-0.1993	0.1512	-0.0563	-0.0214	0.0123	1	-0.0467	0.1848	-0.1123	-0.0028	0.0170
2	-0.1463	0.1533	-0.0586	-0.0149	0.0123	2	-0.0912	0.1848	-0.1056	-0.0100	0.0164
3	-0.0912	0.1533	-0.0634	-0.0087	0.0130	3	-0.0019	0.1848	-0.1056	-0.0028	0.0170
5	0.0127	0.1565	-0.0704	0.0034	0.0131	5	0.0629	0.1897	-0.0966	0.0108	0.0173
7	0.1293	0.1616	-0.0704	0.0170	0.0138	7	0.2721	0.2098	-0.1325	0.0345	0.0216
10	0.4833	0.2248	-0.1348	0.0575	0.0261	10	0.8407	0.3145	-0.1774	0.1005	0.0409
15	0.8407	0.3145	-0.1774	0.0409	0.0261	15	1.0803	0.4644	-0.2381	0.1304	0.0622
20	1.0803	0.4644	-0.2381	0.0607	0.0261	20	1.1615	0.5931	-0.2695	0.1406	0.0793
$M = 1.00$											
-10	-0.5808	0.2847	-0.0135	-0.0680	0.0257	-10	-0.5478	0.2781	-0.0108	-0.0650	0.0265
-7	-0.4650	0.2396	-0.0494	-0.0526	0.0208	-7	-0.4334	0.2301	-0.0445	-0.0505	0.0215
-5	-0.3838	0.2146	-0.0674	-0.0425	0.0189	-5	-0.3527	0.2002	-0.0594	-0.0382	0.0192
-3	-0.2883	0.1947	-0.0831	-0.0317	0.0176	-3	-0.2262	0.1848	-0.0863	-0.0230	0.0168
-2	-0.2396	0.1848	-0.0854	-0.0258	0.0167	-2	-0.1767	0.1848	-0.0966	-0.0181	0.0161
-1	-0.1767	0.1848	-0.0966	-0.0181	0.0161	-1	-0.1092	0.1804	-0.1014	-0.0095	0.0166
0	-0.1092	0.1804	-0.1014	0.0166	0.0166	0	-0.0488	0.1822	-0.1100	-0.0027	0.0174
1	-0.0488	0.1822	-0.1100	0.0044	0.0181	1	0.0117	0.1851	-0.1122	0.0044	0.0181
2	0.0117	0.1851	-0.1122	0.0044	0.0181	2	0.0624	0.1919	-0.1187	0.0107	0.0183
3	0.0624	0.1919	-0.1187	0.0107	0.0183	3	0.1521	0.2015	-0.1		

TABLE 3 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 3 MODEL - Continued

 $\frac{t}{c} = 0.06$ $\frac{x_s}{c} = 0.60$

α , deg	C_L	C_D	C_H	C_l	C_n		α , deg	C_L	C_D	C_H	C_l	C_n
$M = 0.60$											$M = 0.95$	
-10	-0.7669	0.2102	0.0205	-0.0889	0.0154		-10	-0.8057	0.2867	0.0352	-0.0957	0.0261
-7	-0.6592	0.1645	-0.0288	-0.0766	0.0111		-7	-0.7421	0.2347	0.0352	-0.0854	0.0201
-5	-0.5497	0.1352	-0.0370	-0.0640	0.0081		-5	-0.6573	0.2002	0.0304	-0.0741	0.0161
-3	-0.4457	0.1188	-0.0361	-0.0517	0.0063		-3	-0.5343	0.1741	0.0211	-0.0600	0.0131
-2	-0.3918	0.1114	-0.0328	-0.0451	0.0060		-2	-0.4771	0.1586	0.0070	-0.0528	0.0122
-1	-0.3472	0.1096	-0.0312	-0.0394	0.0058		-1	-0.3986	0.1512	0.0000	-0.0436	0.0115
0	-0.3045	0.1040	-0.0247	-0.0334	0.0049		0	-0.3392	0.1429	-0.0047	-0.0360	0.0105
1	-0.2507	0.1935	-0.0288	-0.0283	0.0053		1	-0.2650	0.1408	-0.0047	-0.0288	0.0105
2	-0.2080	0.1021	-0.0165	-0.0222	0.0058		2	-0.2120	0.1355	-0.0070	-0.0223	0.0105
3	-0.1578	0.1935	-0.0247	-0.0165	0.0059		3	-0.1378	0.1408	-0.0117	-0.0137	0.0115
5	-0.0446	0.1916	-0.0247	-0.0042	0.0068		5	-0.0318	0.1461	-0.0352	0.0069	0.0127
7	-0.0780	0.1935	-0.0205	0.0099	0.0068		7	-0.1802	0.1461	-0.0399	0.0223	0.0123
10	-0.3751	0.1426	-0.0575	0.0424	0.0101		10	-0.5004	0.1773	-0.0751	0.0583	0.0202
15	-0.6221	0.2410	-0.1035	0.0766	0.0245		15	-0.8163	0.2763	-0.1313	0.0978	0.0357
20	-0.6982	0.3179	-0.1355	0.0868	0.0331		20	-0.9223	0.3806	-0.1900	0.1105	0.0496
25	-0.7149	0.3944	-0.1643	0.0880	0.0423		25	-0.9753	0.4849	-0.2180	0.1153	0.0616
$M = 0.80$											$M = 1.00$	
-10	-0.7668	0.2411	-0.0006	-0.0924	0.0195		-10	-0.7473	0.3097	0.0247	-0.0864	0.0286
-7	-0.7417	0.1916	-0.0028	-0.0854	0.0143		-7	-0.6295	0.2498	-0.0009	-0.0710	0.0224
-5	-0.6637	0.1607	-0.0083	-0.0755	0.0109		-5	-0.5422	0.2187	-0.0158	-0.0598	0.0192
-3	-0.5405	0.1385	-0.0083	-0.0610	0.0086		-3	-0.4224	0.1897	-0.0337	-0.0457	0.0164
-2	-0.4777	0.1297	-0.0055	-0.0537	0.0077		-2	-0.3574	0.1807	-0.0422	-0.0378	0.0157
-1	-0.4249	0.1237	-0.0028	-0.0468	0.0070		-1	-0.2944	0.1748	-0.0490	-0.0302	0.0157
0	-0.3696	0.1174	-0.0028	-0.0403	0.0062		0	-0.2234	0.1698	-0.0539	-0.0230	0.0154
1	-0.3143	0.1156	-0.0028	-0.0340	0.0062		1	-0.1824	0.1647	-0.0584	-0.0161	0.0154
2	-0.2615	0.1114	-0.0055	-0.0271	0.0061		2	-0.1015	0.1647	-0.0593	-0.0092	0.0161
3	-0.1961	0.1101	-0.0055	-0.0199	0.0064		3	-0.0406	0.1647	-0.0642	-0.0016	0.0161
5	-0.0754	0.1051	-0.0055	-0.0069	0.0070		5	-0.0105	0.1667	-0.0651	0.0138	0.0162
7	-0.0779	0.1114	-0.0055	0.0104	0.0080		7	-0.2640	0.1708	-0.0741	0.0315	0.0178
10	-0.3897	0.1423	-0.0367	0.0448	0.0129		10	-0.5341	0.1947	-0.1033	0.0624	0.0236
15	-0.6763	0.2386	-0.1073	0.0824	0.0293		15	-0.8630	0.3097	-0.1685	0.1019	0.0406
20	-0.7467	0.3153	-0.1446	0.0905	0.0584		20	1.0965	0.4593	-0.2291	0.1321	0.0633
25	-0.7794	0.4018	-0.1613	0.0936	0.0501		25	1.0778	0.5992	-0.2830	0.1413	0.0809
$M = 0.85$											$M = 1.05$	
-10	-0.7794	0.2496	-0.0006	-0.0944	0.0229		-10	-0.7216	0.2974	0.0216	-0.0824	0.0283
-7	-0.7322	0.1405	-0.0021	-0.0856	0.0168		-7	-0.6124	0.2455	-0.0043	-0.0685	0.0223
-5	-0.6967	0.1684	-0.0052	-0.0793	0.0132		-5	-0.5188	0.2130	-0.0151	-0.0568	0.0189
-3	-0.5857	0.1453	-0.0052	-0.0650	0.0108		-3	-0.4096	0.1900	-0.0324	-0.0436	0.0163
-2	-0.5196	0.1393	-0.0078	-0.0573	0.0097		-2	-0.3413	0.1765	-0.0410	-0.0353	0.0154
-1	-0.4511	0.1301	-0.0120	-0.0501	0.0086		-1	-0.2926	0.1726	-0.0474	-0.0300	0.0150
0	-0.3897	0.1231	-0.0130	-0.0424	0.0082		0	-0.2243	0.1726	-0.0518	-0.0221	0.0147
1	-0.3307	0.1186	-0.0083	-0.0353	0.0077		1	-0.1580	0.1650	-0.0573	-0.0158	0.0102
2	-0.2716	0.1162	-0.0105	-0.0279	0.0077		2	-0.0975	0.1650	-0.0556	-0.0085	0.0159
3	-0.2008	0.1150	-0.0150	-0.0210	0.0075		3	-0.0293	0.1630	-0.0621	-0.0009	0.0165
5	-0.0685	0.1058	-0.0052	-0.0059	0.0086		5	-0.0975	0.1630	-0.0643	0.0145	0.0166
7	-0.0945	0.1162	-0.0031	0.0124	0.0090		7	-0.2574	0.1726	-0.0733	0.0312	0.0172
10	-0.0393	0.1464	-0.0418	0.0464	0.0157		10	-0.5168	0.2052	-0.1035	0.0600	0.0242
15	-0.7086	0.2416	-0.1097	0.0869	0.0320		15	-0.8387	0.3165	-0.1704	0.0978	0.0407
20	-0.7889	0.3205	-0.1515	0.0955	0.0425		20	1.0766	0.4757	-0.2330	0.1285	0.0623
25	-0.8148	0.4180	-0.1751	0.0982	0.0549		25	1.2287	0.6370	-0.2933	0.1483	0.0877
$M = 0.90$											$M = 1.10$	
-10	-0.7798	0.2629	0.0123	-0.0952	0.0254		-10	-0.6935	0.2858	0.0228	-0.0801	0.0292
-7	-0.7375	0.2137	0.0173	-0.0876	0.0197		-7	-0.5885	0.2305	-0.0021	-0.0661	0.0238
-5	-0.7174	0.1863	0.0370	-0.0822	0.0156		-5	-0.4967	0.2028	-0.0166	-0.0555	0.0209
-3	-0.6127	0.1589	0.0320	-0.0692	0.0124		-3	-0.3936	0.1751	-0.0311	-0.0425	0.0185
-2	-0.5414	0.1446	0.0247	-0.0598	0.0112		-2	-0.3299	0.1696	-0.0373	-0.0349	0.0170
-1	-0.4615	0.1337	0.0257	-0.0508	0.0104		-1	-0.2699	0.1659	-0.0436	-0.0282	0.0161
0	-0.4011	0.1315	0.0271	-0.0443	0.0098		0	-0.2212	0.1604	-0.0456	-0.0218	0.0155
1	-0.3454	0.1261	0.0247	-0.0375	0.0095		1	-0.1593	0.1567	-0.0518	-0.0155	0.0158
2	-0.2785	0.1205	0.0236	-0.0296	0.0093		2	-0.1031	0.1567	-0.0518	-0.0091	0.0163
3	-0.2117	0.1172	0.0173	-0.0224	0.0088		3	-0.0375	0.1567	-0.0580	-0.0018	0.0166
5	-0.0557	0.1183	0.0025	-0.0051	0.0090		5	-0.1031	0.1567	-0.0601	0.0143	0.0169
7	-0.1381	0.1281	0.0173	-0.0177	0.0098		7	-0.2530	0.1677	-0.0684	0.0306	0.0179
10	-0.4322	0.1555	0.0493	0.0505	0.0168		10	-0.4967	0.2028	-0.0954	0.0570	0.0246
15	-0.7375	0.2466	0.1134	0.0901	0.0326		15	-0.8003	0.3153	-0.1637	0.0931	0.0402
20	-0.8355	0.3418	0.1676	0.1002	0.0432		20	1.0346	0.4701	-0.2281	0.1225	0.0606
25	-0.8645	0.4405	0.1897	0.1038	0.0549		25	1.1958	0.6453	-0.2902	0.1435	0.0840

TABLE 3 - THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 3 MODEL - Continued

$$\frac{x}{c} = 0.06 \quad \frac{x_B}{c} = 0.80$$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
$M = 0.95$											
-10	-0.9310	0.2262	0.1026	-0.1038	0.0188	-10	-1.0129	0.3115	0.1557	-0.1146	0.0321
-7	-0.7814	0.1675	0.0595	-0.0862	0.0130	-7	-0.8636	0.2412	0.1344	-0.0959	0.0230
-5	-0.6580	0.1398	0.0595	-0.0729	0.0097	-5	-0.7570	0.2045	0.1203	-0.0821	0.0185
-3	-0.5347	0.1234	0.0529	-0.0590	0.0077	-3	-0.6184	0.1729	0.1014	-0.0656	0.0150
-2	-0.4786	0.1159	0.0595	-0.0523	0.0068	-2	-0.5395	0.1574	0.0919	-0.0573	0.0140
-1	-0.4262	0.1103	0.0595	-0.0460	0.0062	-1	-0.4585	0.1469	0.0849	-0.0480	0.0132
0	-0.3739	0.1047	0.0645	-0.0399	0.0055	0	-0.3860	0.1363	0.0802	-0.0404	0.0124
1	-0.3178	0.0995	0.0579	-0.0342	0.0052	1	-0.3092	0.1333	0.0778	-0.0328	0.0121
2	-0.2617	0.0957	0.0612	-0.0281	0.0051	2	-0.2346	0.1290	0.0755	-0.0235	0.0121
3	-0.2056	0.0920	0.0637	-0.0224	0.0049	3	-0.1493	0.1258	0.0637	-0.0148	0.0121
5	-0.0673	0.0864	0.0579	-0.0073	0.0055	5	0.0213	0.1154	0.0566	0.0041	0.0102
7	0.0636	0.0920	0.0546	0.0082	0.0049	7	0.2239	0.1207	0.0212	0.0262	0.0107
10	0.3178	0.1286	0.0166	0.0366	0.0083	10	0.5224	0.1668	-0.0354	0.0597	0.0197
15	0.6057	0.2318	-0.0661	0.0750	0.0232	15	0.8743	0.2883	-0.1203	0.1035	0.0384
20	0.7104	0.3070	-0.1258	0.0877	0.0346	20	0.9233	0.3723	-0.1816	0.1115	0.0491
25	0.7216	0.3825	-0.1448	0.0883	0.0440	25	0.9916	0.4898	-0.2217	0.1177	0.0633
$M = 0.80$											
$M = 1.00$											
-10	-0.9365	0.2564	0.0896	-0.1065	0.0227	-10	-0.9397	0.3216	0.1401	-0.1055	0.0337
-7	-0.8808	0.1992	0.0845	-0.0950	0.0160	-7	-0.7967	0.2513	0.1152	-0.0884	0.0253
-5	-0.7467	0.1617	0.0823	-0.0815	0.0119	-5	-0.6823	0.2110	0.1017	-0.0754	0.0206
-3	-0.6024	0.1369	0.0806	-0.0651	0.0094	-3	-0.5516	0.1808	0.0859	-0.0602	0.0176
-2	-0.5391	0.1283	0.0857	-0.0577	0.0082	-2	-0.4740	0.1657	0.0791	-0.0512	0.0166
-1	-0.4758	0.1195	0.0828	-0.0549	0.0074	-1	-0.4086	0.1557	0.0723	-0.0440	0.0158
0	-0.4126	0.1121	0.0857	-0.0438	0.0066	0	-0.3432	0.1457	0.0655	-0.0364	0.0154
1	-0.3493	0.1058	0.0840	-0.0364	0.0063	1	-0.2656	0.1397	0.0532	-0.0284	0.0146
2	-0.2860	0.0995	0.0874	-0.0295	0.0059	2	-0.2043	0.1356	0.0610	-0.0205	0.0143
3	-0.2177	0.0959	0.0851	-0.0221	0.0059	3	-0.1144	0.1305	0.0543	-0.0116	0.0131
5	-0.0607	0.0845	0.0790	-0.0057	0.0057	5	0.0695	0.1305	0.0293	0.0096	0.0127
7	0.0911	0.0921	0.0739	0.0106	0.0059	7	0.2656	0.1356	0.0045	0.0304	0.0135
10	0.3999	0.1357	0.0157	0.0442	0.0131	10	0.5312	0.1828	-0.0520	0.0598	0.0225
15	0.6707	0.2240	-0.0784	0.0815	0.0296	15	0.8825	0.3064	-0.1423	0.1025	0.0428
20	0.7669	0.3063	-0.1355	0.0917	0.0393	20	1.1318	0.4621	-0.2056	0.1342	0.0633
25	0.7846	0.3946	-0.1556	0.0938	0.0498	25	1.1890	0.6029	-0.2756	0.1418	0.0770
$M = 0.85$											
$M = 1.05$											
-10	-0.9389	0.2631	0.0946	-0.1081	0.0249	-10	-0.9104	0.3185	0.1389	-0.1010	0.0324
-7	-0.8890	0.2080	0.1020	-0.0981	0.0174	-7	-0.7492	0.2431	0.1129	-0.0843	0.0243
-5	-0.7891	0.1695	0.0920	-0.0869	0.0133	-5	-0.6632	0.2064	0.0976	-0.0717	0.0198
-3	-0.6346	0.1414	0.0873	-0.0689	0.0107	-3	-0.5298	0.1756	0.0846	-0.0572	0.0167
-2	-0.5657	0.1310	0.0920	-0.0604	0.0098	-2	-0.4709	0.1640	0.0803	-0.0492	0.0157
-1	-0.4992	0.1227	0.0962	-0.0531	0.0087	-1	-0.4003	0.1544	0.0716	-0.0422	0.0145
0	-0.4278	0.1134	0.0941	-0.0454	0.0079	0	-0.3336	0.1468	0.0673	-0.0349	0.0138
1	-0.3565	0.1065	0.0857	-0.0373	0.0077	1	-0.2669	0.1409	0.0629	-0.0267	0.0132
2	-0.2855	0.1005	0.0879	-0.0296	0.0074	2	-0.1766	0.1352	0.0629	-0.0184	0.0132
3	-0.2187	0.0970	0.0831	-0.0223	0.0070	3	-0.0981	0.1273	0.0521	-0.0092	0.0132
5	-0.0570	0.0901	0.0804	-0.0050	0.0074	5	0.0981	0.1352	0.0230	0.0190	0.0129
7	0.1188	0.0958	0.0725	0.0138	0.0068	7	0.2747	0.1448	-0.0043	0.0308	0.0145
10	0.4207	0.1379	0.0158	0.0465	0.0142	10	0.5102	0.1852	-0.0521	0.0575	0.0227
15	0.7131	0.2327	-0.0894	0.0854	0.0300	15	0.8516	0.3088	-0.1410	0.0984	0.0403
20	0.8010	0.3157	-0.1457	0.0958	0.0407	20	1.1027	0.4766	-0.2170	0.1308	0.0631
25	0.8248	0.4091	-0.1672	0.0981	0.0522	25	1.2558	0.6465	-0.2822	0.1495	0.0852
$M = 0.90$											
$M = 1.10$											
-10	-0.9635	0.2821	0.1215	-0.1110	0.0278	-10	-0.8868	0.2989	0.1356	-0.0983	0.0319
-7	-0.9075	0.2259	0.1338	-0.1004	0.0200	-7	-0.7397	0.2321	0.1148	-0.0818	0.0243
-5	-0.8157	0.1873	0.1264	-0.0885	0.0156	-5	-0.6340	0.1949	0.1002	-0.0690	0.0199
-3	-0.6790	0.1544	0.1215	-0.0722	0.0122	-3	-0.5208	0.1670	0.0856	-0.0562	0.0170
-2	-0.5849	0.1432	0.1056	-0.0627	0.0111	-2	-0.4529	0.1559	0.0793	-0.0485	0.0161
-1	-0.5154	0.1322	0.1056	-0.0548	0.0101	-1	-0.3963	0.1466	0.0751	-0.0409	0.0146
0	-0.4437	0.1212	0.1041	-0.0464	0.0092	0	-0.3208	0.1393	0.0668	-0.0336	0.0137
1	-0.3697	0.1156	0.0991	-0.0392	0.0087	1	-0.2453	0.1062	-0.0380	-0.0131	0.0132
2	-0.3025	0.1058	0.0966	-0.0308	0.0082	2	-0.1736	0.1243	0.0605	-0.0177	0.0132
3	-0.2084	0.0993	0.0868	-0.0210	-0.0096	3	-0.0793	0.1206	0.0480	-0.0076	0.0132
5	-0.0426	0.0937	0.0768	-0.0033	0.0087	5	0.1019	0.1243	0.0251	0.0119	0.0126
7	0.1613	0.1080	0.0471	0.0185	0.0087	7	0.2642	0.1428	-0.0042	0.0296	0.0137
10	0.4795	0.1488	-0.0074	0.0537	0.0169	10	0.4944	0.1857	-0.0501	0.0553	0.0214
15	0.7955	0.2481	-0.0942	0.0935	0.0327	15	0.8114	0.3155	-0.1356	0.0931	0.0380
20	0.8448	0.3361	-0.1611	0.1008	0.0431	20	1.0567	0.4732	-0.2087	0.1243	0.0597
25	0.8851	0.4408	-0.1883	0.1052	0.0561	25	1.2265	0.6589	-0.2713	0.1450	0.0834

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TABLE 3 - THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 3 MODEL - Concluded

 $\frac{x}{c} = 0.06$ $\frac{x_b}{c} = 1.00$

α , deg	c_L	c_D	c_M	c_I	c_n	α , deg	c_L	c_D	c_M	c_I	c_n
$M = 0.60$											
$M = 0.95$											
-10	-1.1030	.2797	.2315	-.1292	.0256	-10	-1.1309	.3295	.3162	-.1319	.0356
-7	-.9272	.2030	.1902	-.1080	.0178	-7	-.9602	.2507	.2879	-.1115	.0263
-5	-.7852	.1645	.1762	-.0932	.0138	-5	-.8322	.2036	.2737	-.0963	.0198
-3	-.6580	.1454	.1820	-.0786	.0110	-3	-.6828	.1669	.2407	-.0784	.0165
-2	-.5982	.1368	.1736	-.0717	.0106	-2	-.5975	.1564	.2360	-.0691	.0149
-1	-.5234	.1279	.1902	-.0620	.0098	-1	-.5121	.1460	.2322	-.0608	.0141
0	-.4674	.1215	.1736	-.0566	.0084	0	-.4310	.1353	.2218	-.0528	.0137
1	-.3926	.1148	.1654	-.0496	.0080	1	-.3542	.1270	.2171	-.0439	.0129
2	-.3365	.1122	.1654	-.0426	.0077	2	-.2646	.1197	.2077	-.0345	.0121
3	-.2617	.1058	.1612	-.0339	.0059	3	-.1707	.1197	.1935	-.0245	.0116
5	-.0935	.1002	.1364	-.0160	.0065	5	.0384	.1122	.1463	-.0010	.0108
7	.0636	.1047	.1199	-.0024	.0062	7	.2603	.1197	.0821	-.0245	.0106
10	.3365	.11462	.0579	.0333	.0077	10	.3719	.1752	-.0047	.0604	.0190
15	.6132	.2527	-.0703	.0705	.0214	15	.8621	.2896	-.0897	.0984	.0367
20	.7478	.3346	-.1539	.0889	.0336	20	.9602	.3873	-.1983	.1115	.0483
25	.7478	.4019	-.1539	.0889	.0423	25	1.0114	.4974	-.2313	.1174	.0622
$M = 0.80$											
$M = 1.00$											
-10	-1.1061	.2961	.2324	-.1311	.0280	-10	-1.0835	.3287	.3165	-.1264	.0364
-7	-.9998	.2227	.2100	-.1143	.0202	-7	-.9199	.2484	.2894	-.1068	.0289
-5	-.8479	.1830	.1987	-.0962	.0159	-5	-.7768	.2050	.2622	-.0910	.0219
-3	-.6834	.1506	.1960	-.0778	.0123	-3	-.6337	.1719	.2487	-.0751	.0179
-2	-.5176	.1420	.1960	-.0696	.0109	-2	-.5566	.1568	.2397	-.0662	.0170
-1	-.5366	.1293	.1932	-.0618	.0101	-1	-.4906	.1498	.2352	-.0585	.0159
0	-.4682	.1233	.1914	-.0545	.0091	0	-.4007	.1357	.2216	-.0496	.0147
1	-.3923	.1169	.1876	-.0467	.0086	1	-.3107	.1267	.2125	-.0400	.0135
2	.3164	.1109	.1903	-.0389	.0084	2	-.2453	.1206	.1963	-.0314	.0116
3	-.2405	.1045	.1792	-.0303	.0083	3	-.1104	.1186	.1718	-.0179	.0111
5	-.0506	.0921	.1596	-.0106	.0083	5	.1022	.1267	.1158	-.0063	.0109
7	.1139	.1020	.1405	-.0082	.0083	7	.3026	.1317	.0660	.0284	.0119
10	.4075	.1420	.0672	.0418	.0128	10	.5560	.1881	-.0091	.0582	.0209
15	.6707	.2415	-.0784	.0778	.0287	15	.9936	.3156	-.1158	.1016	.0393
20	.7973	.3285	-.1567	.0934	.0392	20	1.1448	.4765	-.1990	.1326	.0613
25	.8099	.4159	-.1708	.0950	.0504	25	1.2061	.6112	-.2894	.1422	.0761
$M = 0.85$											
$M = 1.05$											
-10	-1.1053	.3016	.2444	-.1327	.0319	-10	-1.0599	.3176	.3082	-.1201	.0350
-7	-.0173	.2327	.2366	-.1181	.0230	-7	-.8872	.2452	.2779	-.1019	.0271
-5	-.8605	.1859	.2130	-.0992	.0175	-5	-.7616	.2028	.2648	-.0864	.0204
-3	-.6893	.1507	.1982	-.0792	.0136	-3	-.6242	.1727	.2432	-.0711	.0164
-2	-.5061	.1391	.1972	-.0704	.0122	-2	-.5614	.1584	.2388	-.0642	.0152
-1	-.5348	.1274	.1972	-.0623	.0111	-1	-.4750	.1476	.2301	-.0553	.0137
0	-.4635	.1215	.2008	-.0538	.0098	0	-.3886	.1352	.2171	-.0457	.0126
1	-.3874	.1134	.1903	-.0462	.0092	1	-.2866	.1294	.1910	-.0340	.0116
2	-.3090	.1074	.1919	-.0377	.0083	2	-.1767	.1227	.1737	-.0232	.0125
3	-.2211	.0994	.1787	-.0277	.0079	3	-.0785	.1244	.1476	-.0124	.0119
5	-.0380	.0946	.1630	-.0092	.0077	5	.1099	.1274	.1086	-.0083	.0122
7	.1474	.1041	.1367	-.0115	.0074	7	.2984	.1419	.0565	.0295	.0145
10	.4302	.1450	.1157	-.0442	.0151	10	.5260	.1922	-.0130	.0556	.0221
15	.7131	.2501	-.0904	.0831	.0319	15	.8558	.3176	-.1129	.0966	.0400
20	.8319	.3321	-.1683	.0977	.0435	20	1.1149	.4866	-.1997	.1293	.0628
25	.8533	.4314	-.1893	.0992	.0598	25	1.2562	.6603	-.2779	.1480	.0852
$M = 0.90$											
$M = 1.10$											
-10	-1.1342	.3185	.2675	-.1368	.0353	-10	-1.0038	.2879	.2933	-.1143	.0352
-7	-.0177	.2414	.2728	-.1190	.0254	-7	-.8523	.2216	.2765	-.0965	.0272
-5	-.8966	.1995	.2628	-.1030	.0200	-5	-.7235	.1807	.2555	-.0827	.0225
-3	-.7083	.1621	.2330	-.0816	.0153	-3	-.5871	.1528	.2388	-.0683	.0192
-2	-.6187	.1477	.2232	-.0718	.0139	-2	-.5151	.1388	.2346	-.0598	.0170
-1	-.5425	.1390	.2232	-.0635	.0129	-1	-.4356	.1276	.2220	-.0503	.0159
0	-.4662	.1311	.2181	-.0559	.0116	0	-.3523	.1193	.2011	-.0414	.0147
1	-.3676	.1201	.2132	-.0453	.0108	1	-.2348	.1108	.1843	-.0291	.0136
2	-.2914	.1145	.2052	-.0370	.0099	2	-.1326	.1072	.1592	-.0178	.0132
3	-.1973	.1092	.1834	-.0265	.0092	3	-.0568	.1072	.1389	-.0092	.0129
5	.0000	.0993	.1587	-.0065	.0103	5	.1326	.1201	.0964	.0107	.0135
7	.2017	.1125	.1141	-.0171	.0087	7	.2992	.1398	.0503	.0294	.0156
10	.5156	.1621	.0298	.0537	.0174	10	.5114	.1900	-.0126	.0536	.0228
15	.7845	.2580	-.0992	.0899	.0330	15	.8371	.3195	-.1131	.0935	.0404
20	.8877	.3528	-.1834	.1023	.0438	20	1.0795	.4731	-.1927	.1241	.0614
25	.9146	.4564	-.2083	.1055	.0565	25	1.2424	.6687	-.2723	.1450	.0846

TABLE 4 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 4 MODEL -

 $\frac{x}{c} = 0.04$ $\frac{x_b}{c} = \text{NONE}$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
-10	.7045	.1205	.0119	-.0840	.0130	-7	.6786	.1024	.0766	-.0769	.0104
-7	.5300	.0583	-.0305	-.0605	.0060	-5	.5096	.0587	.0401	-.0582	.0062
-5	.3835	.0310	-.0200	-.0431	.0029	-3	.3234	.0277	.0168	-.0359	.0034
-3	.2370	.0169	-.0091	-.0258	.0020	-2	.2131	.0187	.0094	-.0238	.0018
-2	.1551	.0138	-.0058	-.0167	.0015	-1	.0906	.0141	.0024	-.0104	.0013
-1	.0819	.0125	-.0021	-.0078	.0010	0	.0073	.0124	.0049	.0020	.0012
0	.0043	.0114	-.0013	.0020	.0011	1	.1200	.0141	.0038	.0149	.0019
1	.0668	.0154	.0035	.0108	.0016	2	.2278	.0208	-.0063	.0273	.0032
2	.1508	.0209	.0104	.0206	.0023	3	.3258	.0268	-.0106	.0387	.0046
3	.2262	.0254	.0129	.0291	.0032	5	.5341	.0533	-.0428	.0630	.0094
5	.3813	.0437	.0226	.0543	.0066						
7	.5278	.0742	.0187	.0667	.0116						
10	.6786	.1351	-.0229	.0899	.0210						
15	.7282	.2235	-.0742	.1046	.0330						
20	.7368	.3072	-.0626	.1000	.0442						
25	.7562	.3941	-.0908	.1003	.0537						
$M = 0.80$											
-10	.7878	.1411	.0006	-.0904	.0133	-7	.5785	.0911	.0679	-.0654	.0098
-7	.6108	.0751	-.0179	-.0678	.0069	-5	.4376	.0565	.0431	-.0488	.0063
-5	.4574	.0410	-.0219	-.0501	.0037	-3	.2643	.0301	.0215	-.0297	.0034
-3	.2803	.0207	-.0121	-.0284	.0016	-2	.1733	.0232	.0136	-.0191	.0025
-2	.1770	.0149	-.0091	-.0177	.0012	-1	.0802	.0192	.0052	-.0082	.0020
-1	.0856	.0112	-.0063	-.0074	.0009	0	.0173	.0184	.0017	.0031	.0019
0	.0030	.0105	.0013	.0027	.0008	1	.1148	.0192	-.0048	.0136	.0024
1	.0885	.0123	.0084	.0130	.0014	2	.2188	.0245	-.0159	.0255	.0035
2	.1859	.0159	.0114	.0237	.0024	3	.2990	.0304	-.0241	.0347	.0049
3	.2921	.0207	.0190	.0358	.0038	5	.4615	.0533	-.0460	.0534	.0085
5	.4751	.0406	.0236	.0566	.0075						
7	.6256	.0715	.0155	.0750	.0124						
10	.7347	.1313	-.0308	.0913	.0214						
15	.7878	.1839	-.0818	.1003	.0342						
$M = 0.85$											
-10	.8209	.1536	.0063	-.0948	.0156	-7	.5987	.0957	.0684	-.0677	.0102
-7	.6413	.0840	-.0110	-.0719	.0081	-5	.4507	.0587	.0453	-.0500	.0063
-5	.5003	.0476	-.0166	-.0543	.0042	-3	.2646	.0336	.0206	-.0294	.0032
-3	.3096	.0228	-.0187	-.0319	.0019	-2	.1816	.0267	.0121	-.0197	.0022
-2	.1990	.0160	-.0113	-.0195	.0013	-1	.0830	.0212	.0035	-.0088	.0018
-1	.1023	.0112	-.0050	-.0090	.0009	0	.0135	.0210	-.0003	.0024	.0014
0	.0636	.0112	-.0070	-.0057	.0008	1	.1166	.0229	-.0044	.0145	.0021
1	.0912	.0119	.0100	.0128	.0014	2	.2175	.0295	-.0150	.0262	.0031
2	.2018	.0153	.0152	.0245	.0025	3	.2982	.0354	-.0241	.0361	.0045
3	.3068	.0207	.0225	.0367	.0037	5	.4686	.0598	-.0455	.0553	.0081
5	.5058	.0448	.0152	.0600	.0077						
7	.6551	.0755	.0033	.0813	.0127						
$M = 0.90$											
-7	.6677	.0949	.0285	-.0765	.0088	-7	.5740	.0886	.0676	-.0642	.0091
-5	.5144	.0540	.0072	-.0583	.0050	-5	.4208	.0549	.0421	-.0471	.0053
-3	.3170	.0230	-.0154	-.0345	.0021	-3	.2590	.0324	.0203	-.0275	.0026
-2	.2001	.0150	-.0146	-.0209	.0014	-2	.1748	.0257	.0117	-.0188	.0017
-1	.1065	.0115	-.0056	-.0116	.0010	-1	.0798	.0223	.0051	-.0085	.0013
0	.0000	.0099	.0000	.0014	.0009	0	.0065	.0204	-.0010	.0023	.0011
1	.1117	.0105	.0094	.0138	.0016	1	.1144	.0239	-.0060	.0149	.0016
2	.2208	.0150	.0166	.0256	.0025	2	.2007	.0300	-.0140	.0246	.0025
3	.3326	.0220	.0115	.0410	.0040	3	.2870	.0382	-.0244	.0349	.0038
5	.5430	.0498	-.0142	.0637	.0087	5	.4445	.0618	-.0434	.0532	.0071
$M = 1.00$											
-7	.5785	.0911	.0679	-.0654	.0098						
-5	.4376	.0565	.0431	-.0488	.0063						
-3	.2643	.0301	.0215	-.0297	.0034						
-2	.1733	.0232	.0136	-.0191	.0025						
-1	.0802	.0192	.0052	-.0082	.0020						
0	.0173	.0184	.0017	.0031	.0019						
1	.1148	.0192	-.0048	.0136	.0024						
2	.2188	.0245	-.0159	.0255	.0035						
3	.2990	.0304	-.0241	.0347	.0049						
5	.4615	.0533	-.0460	.0534	.0085						
$M = 1.05$											
-7	.5987	.0957	.0684	-.0677	.0102						
-5	.4507	.0587	.0453	-.0500	.0063						
-3	.2646	.0336	.0206	-.0294	.0032						
-2	.1816	.0267	.0121	-.0197	.0022						
-1	.0830	.0212	.0035	-.0088	.0018						
0	.0135	.0210	-.0003	.0024	.0014						
1	.1166	.0229	-.0044	.0145	.0021						
2	.2175	.0295	-.0150	.0262	.0031						
3	.2982	.0354	-.0241	.0361	.0045						
5	.4686	.0598	-.0455	.0553	.0081						
$M = 1.10$											
-7	.5740	.0886	.0676	-.0642	.0091						
-5	.4208	.0549	.0421	-.0471	.0053						
-3	.2590	.0324	.0203	-.0275	.0026						
-2	.1748	.0257	.0117	-.0188	.0017						
-1	.0798	.0223	.0051	-.0085	.0013						
0	.0065	.0204	-.0010	.0023	.0011						
1	.1144	.0239	-.0060	.0149	.0016						
2	.2007	.0300	-.0140	.0246	.0025						
3	.2870	.0382	-.0244	.0349	.0038						
5	.4445	.0618	-.0434	.0532	.0071						

TABLE 4 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 4 MODEL--Continued

 $\frac{t}{c} = 0.04$ $\frac{x_2}{c} = 0.40$

α , deg	C_L	C_D	C_H	C_I	C_n	α , deg	C_L	C_D	C_H	C_I	C_n
$H = 0.60$											
$H = 0.95$											
-10	-.5269	.1957	-.0669	-.0644	.0251	-7	-.6490	.2379	-.0525	-.0789	.0290
-7	-.6194	.1613	-.0823	-.0715	.0213	-5	-.5755	.2030	-.0656	-.0697	.0255
-5	-.5377	.1323	-.0981	-.0602	.0173	-3	-.5070	.1746	-.0695	-.0622	.0223
-3	-.4151	.1111	-.1018	-.0431	.0141	-2	-.4555	.1626	-.0744	-.0554	.0217
-2	-.3549	.1047	-.0978	-.0356	.0135	-1	-.4090	.1506	-.0765	-.0492	.0204
-1	-.3011	.1004	-.0896	-.0277	.0130	0	-.3551	.1415	-.0771	-.0409	.0183
0	-.2387	.1004	-.0860	-.0202	.0130	1	-.2449	.1415	-.0985	-.0288	.0183
1	-.1850	.1004	-.0858	-.0134	.0130	2	-.1592	.1385	-.0935	-.0191	.0186
2	-.1247	.1031	-.0816	-.0057	.0134	3	-.0759	.1391	-.0946	-.0098	.0188
3	-.0602	.1058	-.0756	.0016	.0138	5	-.0612	.1476	-.0963	-.0069	.0206
5	.0516	.1164	-.0689	.0153	.0149	7	-.2204	.1578	-.1001	-.0269	.0222
7	.1635	.1243	-.0551	.0294	.0159	10	.6123	.1897	-.1048	-.0706	.0277
10	.5398	.1533	-.0462	.0708	.0227						
15	.7420	.2380	-.0578	.0992	.0356						
20	.7614	.3141	-.0690	.1011	.0455						
25	.7850	.4104	-.0779	.1028	.0556						
$H = 0.80$											
$H = 1.00$											
-10	-.5674	.2211	-.0691	-.0722	.0280	-7	-.5086	.2241	-.0645	-.0612	.0266
-7	-.6411	.1820	-.1231	-.0812	.0242	-5	-.4221	.1964	-.0839	-.0507	.0238
-5	-.6043	.1559	-.1151	-.0742	.0194	-3	-.3247	.1756	-.1004	-.0387	.0221
-3	-.5616	.1304	-.1026	-.0669	.0165	-2	-.2705	.1676	-.1098	-.0325	.0215
-2	-.4938	.1196	-.0998	-.0581	.0154	-1	-.2164	.1623	-.1158	-.0263	.0199
-1	-.4274	.1124	-.0964	-.0485	.0148	0	-.1537	.1554	-.1232	-.0187	.0198
0	-.3537	.1087	-.0868	-.0387	.0145	1	-.0866	.1543	-.1287	-.0105	.0193
1	-.2800	.1087	-.0813	-.0297	.0145	2	-.0108	.1549	-.1333	-.0008	.0193
2	-.2019	.1087	-.0809	-.0210	.0145	3	.0563	.1623	-.1329	-.0066	.0200
3	-.1253	.1116	-.0762	-.0121	.0147	5	.1840	.1730	-.1364	-.0215	.0223
5	.0000	.1196	-.0686	.0029	.0156	7	.3030	.1783	-.1285	-.0363	.0235
7	.1444	.1268	-.0601	.0206	.0167	10	.6277	.1794	-.1145	-.0722	.0294
10	.5321	.1551	-.0521	.0655	.0250						
$H = 0.85$											
$H = 1.05$											
-7	-.6544	.1969	-.1065	-.0848	.0252	-7	-.5152	.2313	-.0665	-.0641	.0284
-5	-.6144	.1664	-.1076	-.0773	.0204	-5	-.4236	.2044	-.0877	-.0527	.0245
-3	-.5661	.1392	-.1004	-.0685	.0172	-3	-.3360	.1845	-.1039	-.0406	.0225
-2	-.5343	.1290	-.0945	-.0635	.0162	-2	-.2778	.1763	-.1118	-.0340	.0221
-1	-.4763	.1188	-.0942	-.0547	.0154	-1	-.2240	.1702	-.1205	-.0267	.0217
0	-.3866	.1147	-.0904	-.0431	.0149	0	-.1568	.1658	-.1280	-.0192	.0215
1	-.2968	.1120	-.0866	-.0325	.0149	1	-.0896	.1630	-.1162	-.0110	.0204
2	-.2209	.1120	-.0832	-.0235	.0149	2	-.0045	.1653	-.1415	-.0007	.0204
3	-.1450	.1147	-.0798	-.0147	.0152	3	.0560	.1713	-.1370	-.0071	.0206
5	.0000	.1222	-.0775	.0021	.0162	5	.1882	.1851	-.1407	-.0226	.0233
7	.1450	.1304	-.0705	.0199	.0172	7	.3248	.2005	-.1393	-.0387	.0246
10	.5288	.1562	-.0606	.0643	.0247						
15	.6889	.2478	-.0373	.0974	.0385						
$H = 0.90$											
$H = 1.10$											
-7	-.7010	.2171	-.0671	-.0896	.0268	-7	-.4960	.2254	-.0638	-.0610	.0263
-5	-.6751	.1884	-.0575	-.0841	.0237	-5	-.4205	.2015	-.0805	-.0515	.0236
-3	-.6205	.1616	-.0548	-.0750	.0216	-3	-.3235	.1803	-.0993	-.0393	.0216
-2	-.5608	.1462	-.0596	-.0683	.0237	-2	-.2674	.1750	-.1052	-.0326	.0212
-1	-.5063	.1335	-.0651	-.0597	.0188	-1	-.2156	.1681	-.1153	-.0262	.0197
0	-.4206	.1238	-.0729	-.0486	.0158	0	-.1531	.1644	-.0929	-.0190	.0197
1	-.3220	.1220	-.0744	-.0362	.0159	1	-.0863	.1617	-.1312	-.0105	.0197
2	-.2467	.1207	-.0665	-.0272	.0157	2	-.0194	.1617	-.1367	-.0020	.0197
3	-.1584	.1213	-.0697	-.0177	.0157	3	.0496	.1697	-.1398	-.0061	.0198
5	.0000	.1296	-.0803	.0018	.0173	5	.1725	.1829	-.1364	-.0211	.0215
7	.1688	.1373	-.0784	.0219	.0180	7	.3019	.1989	-.1347	-.0371	.0228
10	.5712	.1705	-.0798	.0672	.0265						

TABLE 4 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 4 MODEL - Continued

 $\frac{c}{c} = 0.04$ $\frac{x_2}{c} = 0.60$

α_2 deg	c_L	c_D	c_H	c_I	c_n	α_2 deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
$M = 0.95$											
-10	-0.8319	0.2518	-0.0047	-0.1019	0.0302	-3	-0.6096	0.1868	-0.0350	-0.0703	0.0208
-7	-0.8427	0.1961	-0.0322	-0.0990	0.0238	-2	-0.5408	0.1716	-0.0394	-0.0617	0.0202
-5	-0.7023	0.1535	-0.0572	-0.0819	0.0187	-1	-0.4670	0.1596	-0.0470	-0.0535	0.0183
-3	-0.5402	0.1244	-0.0541	-0.0613	0.0148	0	-0.3687	0.1475	-0.0567	-0.0421	0.0177
-2	-0.4754	0.1137	-0.0469	-0.0531	0.0137	1	-0.2753	0.1475	-0.0568	-0.0308	0.0177
-1	-0.4192	0.1078	-0.0435	-0.0452	0.0130	2	-0.1819	0.1475	-0.0619	-0.0199	0.0174
0	-0.3565	0.1031	-0.0357	-0.0374	0.0126	3	-0.0983	0.1475	-0.0616	-0.0103	0.0181
1	-0.2917	0.1005	-0.0350	-0.0295	0.0123	5	-0.0910	0.1475	-0.0592	-0.0112	0.0181
2	-0.2269	0.1005	-0.0302	-0.0216	0.0122	7	-0.3613	0.1656	-0.0702	-0.0425	0.0222
3	-0.1556	0.1005	-0.0234	-0.0148	0.0122						
5	0.0000	0.0999	-0.0165	0.0043	0.0124						
7	0.2161	0.1094	-0.0115	0.0288	0.0139						
10	0.5597	0.1535	-0.0304	0.0695	0.0225						
15	0.7347	0.2413	-0.0550	0.0960	0.0356						
20	0.7779	0.3199	-0.0751	1.000	0.0452						
25	0.7930	0.4177	-0.0857	1.033	0.0590						
$M = 0.80$											
$M = 1.00$											
-5	-0.7816	0.1776	-0.0667	-0.0898	0.0218	-5	-0.5715	0.2132	-0.0537	-0.0654	0.0239
-3	-0.6681	0.1427	-0.0561	-0.0746	0.0172	-3	-0.4716	0.1854	-0.0655	-0.0537	0.0216
-2	-0.5921	0.1325	-0.0506	-0.0665	0.0159	-2	-0.4107	0.1726	-0.0719	-0.0465	0.0196
-1	-0.5122	0.1230	-0.0426	-0.0573	0.0148	-1	-0.3412	0.1581	-0.0787	-0.0382	0.0187
0	-0.4293	0.1158	-0.0351	-0.0474	0.0143	0	-0.2716	0.1540	-0.0847	-0.0295	0.0180
1	-0.3553	0.1114	-0.0255	-0.0380	0.0137	1	-0.1847	0.1528	-0.0861	-0.0201	0.0178
2	-0.2813	0.1078	-0.0239	-0.0290	0.0134	2	-0.1152	0.1507	-0.0831	-0.0119	0.0178
3	-0.2072	0.1063	-0.0143	-0.0207	0.0133	3	-0.0435	0.1512	-0.0813	-0.0033	0.0182
5	-0.0296	0.1048	-0.0064	0.0009	0.0132	5	-0.1152	0.1528	-0.0734	-0.0148	0.0182
7	0.2398	0.1121	-0.0130	0.0314	0.0148	7	-0.3455	0.1635	-0.0751	-0.0412	0.0220
10	0.5921	0.1543	-0.0330	0.0716	0.0245						
$M = 0.85$											
$M = 1.05$											
-3	-0.6956	0.1554	-0.0473	-0.0790	0.0178	-5	-0.5938	0.2212	-0.0550	-0.0681	0.0244
-2	-0.6291	0.1391	-0.0439	-0.0704	0.0164	-3	-0.4948	0.1930	-0.0661	-0.0561	0.0223
-1	-0.5377	0.1288	-0.0428	-0.0599	0.0153	-2	-0.4273	0.1820	-0.0714	-0.0481	0.0200
0	-0.4434	0.1213	-0.0340	-0.0494	0.0146	-1	-0.3599	0.1720	-0.0796	-0.0404	0.0197
1	-0.3603	0.1152	-0.0300	-0.0395	0.0139	1	-0.2811	0.1648	-0.0864	-0.0307	0.0192
2	-0.2855	0.1118	-0.0232	-0.0298	0.0138	2	-0.1237	0.1587	-0.0849	-0.0125	0.0189
3	-0.1940	0.1104	-0.0212	-0.0200	0.0137	3	-0.0517	0.1587	-0.0818	-0.0039	0.0190
5	-0.0139	0.1077	-0.0104	0.0013	0.0137	5	-0.0247	0.1615	-0.0507	-0.0159	0.0195
7	0.2577	0.1185	-0.0185	0.0332	0.0158	7	-0.3644	0.1737	-0.0733	-0.0437	0.0226
10	0.6153	0.1636	-0.0390	0.0740	0.0240						
$M = 0.90$											
$M = 1.10$											
-3	-0.7171	0.1718	-0.0055	-0.0821	0.0183	-5	-0.5738	0.2125	-0.0513	-0.0662	0.0234
-2	-0.6467	0.1545	-0.0131	-0.0740	0.0172	-3	-0.4655	0.1858	-0.0634	-0.0534	0.0209
-1	-0.5659	0.1391	-0.0202	-0.0639	0.0158	-2	-0.4071	0.1752	-0.0698	-0.0466	0.0190
0	-0.4563	0.1295	-0.0222	-0.0516	0.0150	-1	-0.3421	0.1661	-0.0760	-0.0381	0.0189
1	-0.3781	0.1225	-0.0170	-0.0415	0.0143	0	-0.2706	0.1592	-0.0814	-0.0297	0.0183
2	-0.2868	0.1187	-0.0187	-0.0311	0.0140	1	-0.1949	0.1565	-0.0813	-0.0207	0.0183
3	-0.1825	0.1180	-0.0237	-0.0198	0.0142	2	-0.1213	0.1539	-0.0824	-0.0125	0.0183
5	-0.0078	0.1180	-0.0233	0.0034	0.0145	3	-0.0476	0.1544	-0.0793	-0.0036	0.0186
7	0.2947	0.1372	-0.0333	0.0342	0.0188	5	-0.1191	0.1592	-0.0715	-0.0161	0.0190
10	0.6519	0.1770	-0.0427	0.0762	0.0268	7	-0.3573	0.1714	-0.0693	-0.0434	0.0207

TABLE 4 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 4 MODEL--Continued

$$\frac{t}{c} = 0.04 \quad \frac{x_e}{c} = 0.80$$

α , deg	C_L	C_D	C_H	C_I	C_n	α , deg	C_L	C_D	C_H	C_I	C_n
$M = 0.60$						$M = 0.95$					
-10	-1.0306	.2865	.0781	-.1281	.0317	-3	-.6668	.1894	.0611	-.0776	.0197
-7	-.9613	.2109	.0330	-.1156	.0235	-2	-.5807	.1761	.0405	-.0678	.0195
-5	-.7838	.1651	.0150	-.0953	.0179	-1	-.4823	.1561	.0389	-.0579	.0177
-3	-.6019	.1341	.0162	-.0742	.0144	0	-.3839	.1470	.0392	-.0472	.0166
-2	-.5283	.1224	.0241	-.0660	.0128	1	-.2854	.1500	.0312	-.0358	.0169
-1	-.4590	.1150	.0272	-.0591	.0118	2	-.1993	.1380	.0377	-.0261	.0159
0	-.3941	.1075	.0339	-.0509	.0111	3	-.0960	.1319	.0386	-.0138	.0151
1	-.3291	.1022	.0418	-.0427	.0105	5	.1698	.1301	.0257	.0153	.0159
2	-.2642	.0991	.0490	-.0345	.0101	7	.4405	.1470	-.0039	.0470	.0204
3	-.1775	.0938	.0509	-.0250	.0096						
5	.0000	.0883	.0562	-.0043	.0095						
7	.2208	.1011	.0439	-.0207	.0116						
10	.5586	.1544	-.0107	.0624	.0209						
15	.7621	.2481	-.0576	.0936	.0352						
20	.8141	.3279	-.0876	.1002	.0445						
25	.8184	.4206	-.0963	.1002	.0555						
$M = 0.80$						$M = 1.00$					
-3	-.7088	.1509	.0318	-.0839	.0166	-3	-.5786	.1808	.0464	-.0580	.0189
-2	-.6109	.1371	.0362	-.0736	.0151	-2	-.5090	.1647	.0341	-.0599	.0179
-1	-.5338	.1262	.0451	-.0648	.0139	-1	-.4307	.1530	.0296	-.0511	.0167
0	-.4508	.1152	.0512	-.0556	.0127	0	-.3415	.1444	.0291	-.0412	.0156
1	-.3707	.1079	.0577	-.0461	.0119	1	-.2697	.1380	.0301	-.0327	.0150
2	-.2788	.1028	.0618	-.0360	.0113	2	-.1718	.1305	.0283	-.0218	.0145
3	-.1809	.0956	.0611	-.0247	.0108	3	-.0740	.1284	.0312	-.0112	.0143
5	.0178	.0919	.0686	-.0018	.0106	5	.1718	.1316	.0184	-.0168	.0156
7	.2699	.1043	.0520	-.0274	.0132	7	.4068	.1455	-.0181	.0441	.0194
10	.6050	.1517	-.0178	.0691	.0220						
15	.8126	.2501	-.0780	.0972	.0370						
$M = 0.85$						$M = 1.05$					
-3	-.7468	.1591	.0492	-.0868	.0163	-3	-.5991	.1888	.0503	-.0700	.0193
-2	-.6496	.1434	.0419	-.0758	.0154	-2	-.5270	.1722	.0391	-.0617	.0180
-1	-.5441	.1317	.0495	-.0653	.0143	-1	-.4482	.1595	.0343	-.0521	.0173
0	-.4525	.1181	.0529	-.0547	.0129	0	-.3581	.1512	.0344	-.0427	.0156
1	-.3692	.1113	.0572	-.0449	-.0080	1	-.2748	.1445	.0348	-.0333	.0151
2	-.2721	.1051	.0586	-.0343	.0118	2	-.1779	.1363	.0317	-.0222	.0143
3	-.1582	.0990	.0589	-.0217	.0111	3	-.0653	.1346	.0372	-.0099	.0146
5	.0389	.0956	.0680	.0013	.0111	5	.1959	.1390	.0176	.0195	.0161
7	.3026	.1113	.0532	.0303	.0143	7	.4144	.1539	-.0154	.0458	.0199
10	.6774	.1659	.0056	.0743	.0236						
$M = 0.90$						$M = 1.10$					
-2	-.6602	.1514	.0663	-.0772	.0158	-3	-.5767	.1791	.0498	-.0679	.0183
-1	-.5454	.1399	.0586	-.0653	.0148	-2	-.5008	.1642	.0405	-.0599	.0168
0	-.4540	.1271	.0641	-.0552	.0135	-1	-.4315	.1525	.0375	-.0510	.0157
1	-.3549	.1161	.0622	-.0439	.0127	0	-.3491	.1445	.0357	-.0419	.0147
2	-.2505	.1097	.0573	-.0323	.0123	1	-.2623	.1376	.0374	-.0321	.0141
3	-.1331	.1059	.0527	-.0188	.0120	2	-.1648	.1301	.0335	-.0210	.0097
5	.1018	.1072	.0564	.0073	.0125	3	-.0564	.1295	.0373	-.0086	.0139
7	.3888	.1271	.0259	.0404	.0169	5	.1973	.1365	.0156	-.0207	.0152
10	.7150	.1784	-.0131	.0788	.0268	7	.3924	.1509	-.0132	.0441	.0186

TABLE 4 - THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 4 MODEL - Continued

$$\frac{t}{c} = 0.04 \quad \frac{x_s}{c} = 1.00$$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
-10	-1.2125	.3195	.2047	-.1442	.0370	-2	-.6901	.1679	.2128	-.0770	.0184
-7	-1.1475	.2510	.1659	-.1304	.0264	-1	-.5965	.1570	.2146	-.0671	.0175
-5	-.9743	.1725	.1522	-.1100	.0200	0	-.4930	.1455	.2152	-.0570	.0163
-3	-.8098	.1427	.1637	-.0923	.0162	1	-.3870	.1315	.2072	-.0454	.0151
-2	-.7362	.1332	.1702	-.0838	.0149	2	-.2539	.1248	.2020	-.0314	.0143
-1	-.6625	.1246	.1751	-.0749	.0142	3	-.1306	.1206	.1898	-.0181	.0142
0	-.5716	.1171	.1773	-.0657	.0134	5	.1799	.1279	.1330	.0174	.0164
1	-.4980	.1086	.1793	-.0575	.0123	7	.4264	.1315	.0790	.0466	.0190
2	-.4114	.1033	.1872	-.0473	.0115						
3	-.3031	.0927	.1703	-.0348	.0102						
5	-.0996	.0874	.1636	-.0122	.0098						
7	.1689	.0958	.1252	.0184	.0113						
10	.4980	.1512	.0354	.0598	.0212						
15	.7232	.2449	-.0497	.0946	.0354						
20	.7925	.3248	-.0895	.1044	.0444						
25	.8011	.4131	-.0994	.1038	.0548						
$M = 0.80$											
-3	-.8315	.1607	.1851	-.0932	.0167	-2	-.6099	.1537	.2019	-.0681	.0166
-2	-.7275	.1424	.1840	-.0824	.0156	-1	-.5228	.1403	.1975	-.0593	.0154
-1	-.6385	.1307	.1859	-.0732	.0147	0	-.4247	.1296	.2025	-.0492	.0142
0	-.5434	.1197	.1903	-.0631	.0135	1	-.3267	.1178	.1914	-.0387	.0133
1	-.4514	.1117	.1914	-.0532	.0127	2	-.2026	.1125	.1833	-.0261	.0127
2	-.3356	.1001	.1804	-.0403	.0117	3	-.0610	.1109	.1643	-.0106	.0121
3	-.2168	.0942	.1773	-.0273	.0108	5	.2026	.1189	.1035	.0203	.0153
5	.0119	.0927	.1654	-.0018	.0111	7	.4030	.1403	.0523	.0446	.0192
7	.2821	.1073	.1459	.0293	.0138						
10	.6058	.1570	.0206	.0714	.0234						
$M = 0.85$											
-2	-.7147	.1415	.1836	-.0802	.0157	-2	-.6310	.1607	.2214	-.0704	.0168
-1	-.6201	.1299	.1869	-.0704	.0144	-1	-.5409	.1452	.2137	-.0607	.0158
0	-.5172	.1203	.1889	-.0601	.0133	0	-.4282	.0759	.2099	-.0496	.0141
1	-.4227	.1101	.1888	-.0500	.0126	1	-.3223	.1214	.2047	-.0378	.0133
2	-.2920	.0978	.1770	-.0354	.0112	2	-.1848	.1164	.1872	-.0298	.0131
3	-.1835	.0937	.1753	-.0236	.0106	3	-.0293	.1147	.1585	-.0068	.0137
5	.0586	.0950	.1659	.0027	.0114	5	.2141	.1252	.1035	.0222	.0157
7	.3198	.1114	.1310	.0537	.0151	7	.4124	.1480	.0552	.0482	.0190
10	.6757	.1709	.0531	.0776	.0253						
$M = 0.90$											
-2	-.7266	.1555	.2001	-.0811	.0171	-2	-.6033	.1547	.2163	-.0682	.0160
-1	-.6273	.1414	.2053	-.0704	.0160	-1	-.5100	.1382	.2121	-.0583	.0150
0	-.5175	.1317	.1980	-.0597	.0149	0	-.4015	.1249	.2054	-.0472	.0138
1	-.4051	.1221	.1947	-.0476	.0140	1	-.2886	.1158	.1947	-.0352	.0130
2	-.2692	.1093	.1783	-.0325	.0124	2	-.1519	.1121	.1738	-.0204	.0126
3	-.1568	.1054	.1805	-.0208	.0123	3	-.0109	.1121	.1482	-.0040	.0131
5	.1124	.1041	.1598	.0091	.0125	5	.2127	.1238	.0973	.0230	.0151
7	.3790	.1247	.1081	.0434	.0176	7	.3907	.1451	.0565	.0449	.0181
10	.7057	.1781	.0354	.0813	.0220						
$M = 1.00$											
-2	-.6099	.1537	.2019	-.0681	.0166						
-1	-.5228	.1403	.1975	-.0593	.0154						
0	-.4247	.1296	.2025	-.0492	.0142						
1	-.3267	.1178	.1914	-.0387	.0133						
2	-.2026	.1125	.1833	-.0261	.0127						
3	-.0610	.1109	.1643	-.0106	.0121						
5	.2026	.1189	.1035	.0203	.0153						
7	.4030	.1403	.0523	.0446	.0192						
$M = 1.05$											
-2	-.6310	.1607	.2214	-.0704	.0168						
-1	-.5409	.1452	.2137	-.0607	.0158						
0	-.4282	.0759	.2099	-.0496	.0141						
1	-.3223	.1214	.2047	-.0378	.0133						
2	-.1848	.1164	.1872	-.0298	.0131						
3	-.0293	.1147	.1585	-.0068	.0137						
5	.2141	.1252	.1035	.0222	.0157						
7	.4124	.1480	.0552	.0482	.0190						
$M = 1.10$											
-2	-.6033	.1547	.2163	-.0682	.0160						
-1	-.5100	.1382	.2121	-.0583	.0150						
0	-.4015	.1249	.2054	-.0472	.0138						
1	-.2886	.1158	.1947	-.0352	.0130						
2	-.1519	.1121	.1738	-.0204	.0126						
3	-.0109	.1121	.1482	-.0040	.0131						
5	.2127	.1238	.0973	.0230	.0151						
7	.3907	.1451	.0565	.0449	.0181						

TABLE 4 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 4 MODEL - Continued

 $\frac{x}{c} = 0.06$ $\frac{x}{c} = \text{NONE}$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n						
$M = 0.60$																	
-10	-0.6097	0.0921	0.0268	-0.0723	0.0066	-10	-0.7799	0.1763	0.1391	-0.0897	0.0128						
-7	-0.4552	0.0571	-0.0073	-0.0516	0.0019	-7	-0.8585	0.1044	0.0703	-0.0611	0.0055						
-5	-0.3200	0.0381	-0.0135	-0.0368	0.0003	-5	-0.3868	0.0681	0.0348	-0.0427	0.0022						
-3	-0.1848	0.0312	-0.0061	-0.0208	-0.0002	-3	-0.2233	0.0448	0.0104	-0.0248	0.0004						
-2	-0.1186	0.0298	0.0061	-0.0134	-0.0005	-2	-0.1447	0.0371	0.0035	-0.0153	0.0000						
-1	-0.0524	0.0298	0.0000	-0.0067	-0.0002	0	0.0252	0.0310	-0.0035	0.0038	0.0000						
0	0.0028	0.0298	-0.0012	-0.0000	-0.0002	1	1.006	0.0371	-0.0104	0.0122	0.0004						
1	0.0745	0.0326	-0.0036	0.0087	-0.0005	2	1.5772	0.0371	-0.0104	0.0225	0.0013						
2	0.1407	0.0395	0.0097	0.0154	-0.0005	3	2.2642	0.0448	-0.0174	0.0317	0.0027						
3	0.2097	0.0447	0.0122	0.0234	-0.0002	5	4.308	0.0719	-0.0452	0.0515	0.0068						
5	0.3366	0.0623	0.0061	0.0395	0.0011	7	5.786	0.0991	-0.0835	0.0691	0.0121						
7	0.4645	0.0897	-0.0012	0.0556	0.0056	10	8.145	0.1725	-0.1461	0.0969	0.0221						
10	0.6207	0.1451	-0.0366	0.0757	0.0136	15	1.0661	0.3039	-0.1913	0.1305	0.0424						
15	0.6897	0.2334	-0.0989	0.0904	0.0266	20	1.0912	0.4377	-0.2261	0.1374	0.0570						
20	0.6889	0.3040	-0.1160	0.0884	0.0361	25	1.0912	0.5459	-0.2469	0.1305	0.0622						
25	0.7090	0.3826	-0.1293	0.0891	0.0457	$M = 0.95$											
$M = 0.80$																	
-10	-0.6748	0.1191	0.0239	-0.0801	0.0078	-10	-0.7335	0.1692	0.1268	-0.0821	0.0126						
-7	-0.5182	0.0688	0.0033	-0.0588	0.0025	-7	-0.5282	0.1061	0.0768	-0.0582	0.0053						
-5	-0.3766	0.0431	-0.0041	-0.0407	0.0005	-5	-0.3894	0.0765	0.0521	-0.0425	0.0026						
-3	-0.2256	0.0283	-0.0041	-0.0249	-0.0003	-3	-0.2354	0.0527	0.0267	-0.0242	0.0009						
-2	-0.1380	0.0248	0.0041	-0.0149	-0.0005	-2	-0.1570	0.0460	0.0167	-0.0157	0.0004						
-1	-0.0708	0.0239	0.0000	-0.0072	-0.0003	-1	-0.0634	0.0394	0.0067	-0.0055	0.0004						
0	0.0149	0.0239	0.0041	0.0023	-0.0003	0	0.0211	0.0394	-0.0035	0.0044	0.0005						
1	0.0913	0.0257	0.0049	0.0104	-0.0003	1	0.1177	0.0430	-0.0167	0.0157	0.0005						
2	0.1659	0.0283	0.0107	0.0195	0.0000	2	0.1932	0.0468	-0.0267	0.0238	0.0021						
3	0.2479	0.0367	0.0124	0.0285	0.0015	3	0.2717	0.0542	-0.0374	0.0333	0.0033						
5	0.4083	0.0531	0.0140	0.0475	0.0043	5	0.4286	0.0727	-0.0601	0.0513	0.0068						
7	0.5369	0.0807	-0.0008	0.0633	0.0082	7	0.5645	0.1025	-0.0868	0.0678	0.0118						
10	0.6953	0.1338	-0.0239	0.0851	0.0163	10	0.7727	0.1656	-0.1369	0.0916	0.0214						
15	0.726	0.2310	-0.1064	0.0928	0.0300	15	1.0776	0.3177	-0.2177	0.1311	0.0437						
20	0.7606	0.3154	-0.1344	0.0941	0.0406	20	1.2225	0.4795	-0.2970	0.1920	0.0653						
25	0.7811	0.4043	-0.1534	0.0964	0.0544	25	1.2134	0.6131	-0.2804	0.1495	0.0800						
$M = 0.85$																	
$M = 1.00$																	
-10	-0.6979	0.1336	0.0466	-0.0843	0.0096	-10	-0.7073	0.1632	0.1256	-0.0791	0.0130						
-7	-0.5331	0.0759	0.0186	-0.0617	0.0035	-7	-0.5181	0.1038	0.0773	-0.0569	0.0064						
-5	-0.3875	0.0449	-0.0008	-0.0434	0.0010	-5	-0.3726	0.0738	0.0483	-0.0406	0.0034						
-3	-0.2315	0.0293	-0.0046	-0.0255	-0.0002	-3	-0.2270	0.0537	0.0290	-0.0233	0.0054						
-2	-0.1438	0.0242	0.0015	-0.0157	-0.0004	-2	-0.1485	0.0486	0.0193	-0.0145	0.0050						
-1	-0.0719	0.0224	0.0031	-0.0077	-0.0006	-1	-0.0553	0.0422	0.0065	-0.0046	0.0012						
0	0.0210	0.0224	0.0023	0.0026	-0.0004	0	0.0146	0.0422	-0.0032	0.0039	0.0014						
1	0.1017	0.0260	0.0046	0.0119	-0.0004	1	0.1077	0.0429	-0.0161	0.0141	0.0014						
2	0.1859	0.0302	0.0109	0.0213	0.0004	2	0.1805	0.0486	-0.0257	0.0226	0.0025						
3	0.2648	0.0354	0.0109	0.0298	0.0018	3	0.2678	0.0566	-0.0387	0.0322	0.0044						
5	0.4314	0.0552	0.0015	0.0498	0.0049	5	0.4133	0.0773	-0.0579	0.0495	0.0080						
7	0.5664	0.0845	-0.0202	0.0677	0.0100	7	0.5443	0.1081	-0.0837	0.0650	0.0122						
10	0.7225	0.1422	-0.0481	0.0890	0.0190	10	0.7335	0.1703	-0.1307	0.0880	0.0213						
15	0.7698	0.2380	-0.1171	0.0962	0.0322	15	1.0392	0.3150	-0.2125	0.1254	0.0428						
20	0.8136	0.3295	-0.1521	0.0987	0.0438	20	1.2487	0.5024	-0.2737	0.1533	0.0675						
25	0.8294	0.4200	-0.1691	0.1009	0.0555	25	1.2720	0.6485	-0.2929	0.1590	0.0883						
$M = 0.90$																	
$M = 1.10$																	
-10	-0.7316	0.1531	0.0871	-0.0880	0.0114	-10	-0.6690	0.1494	0.1202	-0.0761	0.0144						
-7	-0.5446	0.0887	0.0512	-0.0643	0.0040	-7	-0.4962	0.0925	0.0740	-0.0545	0.0083						
-5	-0.4039	0.0546	0.0264	-0.0470	0.0012	-5	-0.3568	0.0672	0.0493	-0.0392	0.0050						
-3	-0.2533	0.0343	0.0088	-0.0281	-0.0002	-3	-0.2174	0.0486	0.0278	-0.0227	0.0028						
-2	-0.1539	0.0268	0.0066	-0.0169	-0.0006	-2	-0.1394	0.0418	0.0185	-0.0142	0.0023						
-1	-0.0629	0.0252	0.0044	-0.0076	-0.0006	-1	-0.0641	0.0383	0.0080	-0.0054	0.0023						
0	0.0281	0.0252	0.0000	0.0032	-0.0006	0	0.0139	0.0397	-0.0031	0.0034	0.0019						
1	0.1208	0.0252	-0.0015	0.0133	-0.0002	1	0.1003	0.0418	-0.0154	0.0129	0.0019						
2	0.2019	0.0318	-0.0051	0.0233	0.0008	2	0.1728	0.0466	-0.0216	0.0213	0.0029						
3	0.2847	0.0399	-0.0124	0.0329	0.0023	3	0.2453	0.0535	-0.0389	0.0298	0.0047						
5	0.4403	0.0594	-0.0227	0.0518	0.0062	5	0.3819	0.0775	-0.0555	0.0463	0.0084						
7	0.5810	0.0937	-0.0520	0.0695	0.0110	7	0.5212	0.1048	-0.0802	0.0616	0.0133						
10	0.7482	0.1523	-0.0820	0.0916	0.0200	10	0.7024	0.1665	-0.1233	0.0829	0.0217						
15	0.8806	0.2581	-0.1318	0.1085	0.0341	15	0.9812	0.3070	-0.2004	0.1184	0.0412						
20	0.8905	0.3590	-0.1750	0.1073	0.0456	20	1.1902	0.4839	-0.2621	0.1461	0.0648						
25	0.9071	0.4608	-0.1904	0.1105	0.0581	25	1.2739	0.6484	-0.2929	0.1573	0.0875						

TABLE 4 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 4 MODEL - Continued
 $\frac{x_s}{c} = 0.06$ $\frac{x_s}{c} = 0.40$

α_s deg	c_L	c_D	c_H	c_I	c_n	α_s deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
$M = 0.95$											
-10	-.5628	.1887	-.0366	-.0686	.0206	-10	-.6610	.2934	-.0209	-.0787	.0311
-7	-.6180	.1614	-.0550	-.0733	.0168	-7	-.5666	.2430	-.0453	-.0665	.0255
-5	-.5242	.1288	-.0750	-.0609	.0130	-5	-.5351	.2122	-.0418	-.0615	.0214
-3	-.4276	.1139	-.0793	-.0465	.0109	-3	-.4407	.1849	-.0453	-.0506	.0185
-2	-.3835	.1073	-.0647	-.0398	.0098	-2	-.3935	.1734	-.0523	-.0449	.0171
-1	-.3311	.1018	-.0763	-.0335	.0100	-1	-.3620	.1618	-.0557	-.0392	.0159
0	-.2759	.1004	-.0750	-.0271	.0099	0	-.2676	.1656	-.0835	-.0277	.0162
1	-.2262	.1032	-.0733	-.0211	.0100	1	-.2046	.1618	-.0871	-.0201	.0162
2	-.1710	.1059	-.0733	-.0147	.0101	2	-.1417	.1579	-.0871	-.0134	.0167
3	-.1241	.1073	-.0714	-.0087	.0106	3	-.0472	.1579	-.0856	-.0048	.0178
5	-.0414	.1181	-.0671	-.0023	.0119	5	.0409	.1695	-.0940	-.0086	.0186
7	.0607	.1275	-.0622	.0151	.0129	7	.1731	.1812	-.1079	.0233	.0201
10	.3917	.1586	-.0702	.0519	.0158	10	.4911	.2122	-.1358	.0613	.0268
15	.6621	.2362	-.0854	.0860	.0298	15	.8342	.2780	-.1671	.1039	.0395
20	.6869	.3040	-.1177	.0904	.0379	20	1.0073	.4010	-.2054	.1264	.0566
25	.7035	.3854	-.1343	.0914	.0481	25	1.0230	.5170	-.2298	.1253	.0681
$M = 0.80$											
$M = 1.00$											
-10	-.5690	.2248	-.0351	-.0706	.0239	-10	-.6345	.2957	-.0100	-.0743	.0318
-7	-.6716	.1890	-.0598	-.0819	.0185	-7	-.5167	.2452	-.0415	-.0600	.0261
-5	-.6249	.1597	-.0660	-.0745	.0152	-5	-.4291	.2215	-.0628	-.0482	.0231
-3	-.5690	.1367	-.0561	-.0650	.0121	-3	-.3263	.1991	-.0836	-.0358	.0207
-2	-.5130	.1276	-.0557	-.0573	.0113	-2	-.2719	.1917	-.0909	-.0293	.0201
-1	-.4477	.1220	-.0561	-.0487	.0110	-1	-.2176	.1828	-.1022	-.0222	.0197
0	-.3843	.1183	-.0495	-.0401	.0107	0	-.1632	.1843	-.1103	-.0152	.0195
1	-.3246	.1183	-.0516	-.0328	.0105	1	-.0906	.1798	-.1203	-.0072	.0199
2	-.2649	.1642	-.0487	-.0256	.0105	2	.8914	.1843	-.1236	.0018	.0209
3	-.2089	.1642	-.0487	-.0190	.0111	3	.0423	.1917	-.1303	.0086	.0213
5	.0858	.1229	-.0507	-.0045	.0128	5	.1511	.2021	-.1404	.0218	.0230
7	.0373	.1293	-.0516	-.0104	.0136	7	.2719	.2169	-.1504	-.0358	.0258
10	.3731	.1505	-.0660	.0487	.0179	10	.5439	.2437	-.1564	.0653	.0316
15	.6865	.2276	-.0949	.0878	.0320	15	.9065	.3254	-.2038	.1107	.0460
20	.7499	.3110	-.1279	.0949	.0416	20	1.1029	.4621	-.2473	.1364	.0648
25	.8021	.4166	-.1589	.1007	.0550	25	1.2086	.6108	-.2807	.1496	.0850
$M = 0.85$											
$M = 1.05$											
-10	-.6670	.2408	-.0427	-.0831	.0257	-10	-.6119	.2809	-.0065	-.0714	.0313
-7	-.6863	.2062	-.0447	-.0848	.0211	-7	-.4953	.2350	-.0387	-.0573	.0259
-5	-.6319	.1718	-.0477	-.0773	.0174	-5	-.4108	.2136	-.0580	-.0465	.0232
-3	-.5880	.1503	-.0447	-.0688	.0143	-3	-.3147	.1920	-.0773	-.0343	.0212
-2	-.5441	.1390	-.0388	-.0628	.0130	-2	-.2622	.1878	-.0870	-.0279	.0188
-1	-.4862	.1287	-.0447	-.0543	.0123	-1	-.2040	.1820	-.0986	-.0212	.0198
0	-.4300	.1243	-.0369	-.0454	.0122	0	-.1457	.1777	-.1051	-.0141	.0198
1	-.3686	.1243	-.0350	-.0388	.0121	1	-.0728	.1777	-.1160	-.0062	.0203
2	-.2984	.1201	-.0330	-.0300	.0121	2	-.0233	.1792	-.1205	-.0007	.0208
3	-.2212	.1243	-.0388	-.0211	.0127	3	.0408	.1849	-.1251	.0080	.0215
5	.0878	.1287	-.0516	-.0055	.0137	5	.1457	.1992	-.1354	-.0209	.0232
7	.0527	.1373	-.0598	-.0113	.0147	7	.2535	.2136	-.1463	-.0338	.0258
10	.3756	.1589	-.0738	.0490	.0196	10	.5128	.2421	-.1495	.0628	.0317
15	.7284	.2382	-.1079	.0925	.0339	15	.8741	.3281	-.2030	.1071	.0461
20	.8004	.3289	-.1437	.1005	.0450	20	1.1043	.4786	-.2578	.1361	.0664
25	.8180	.4178	-.1611	.1023	.0559						
$M = 0.90$											
$M = 1.10$											
-10	-.7030	.2658	-.0359	-.0885	.0291	-10	-.5859	.2662	-.0074	-.0681	.0311
-7	-.6964	.2235	-.0129	-.0861	.0241	-7	-.4743	.2250	-.0371	-.0550	.0263
-5	-.6632	.1917	-.0084	-.0805	.0202	-5	-.3906	.2017	-.0599	-.0438	.0235
-3	-.5969	.1663	-.0074	-.0720	.0171	-3	-.2930	.1839	-.0772	-.0322	.0214
-2	-.5505	.1517	-.0110	-.0642	.0152	-2	-.2428	.1770	-.0833	-.0264	.0209
-1	-.4908	.1419	-.0165	-.0559	.0141	-1	-.1953	.1743	-.0956	-.0203	.0206
0	-.4046	.1370	-.0275	-.0449	.0137	0	-.1395	.1632	-.1018	-.0139	.0206
1	-.3250	.1378	-.0348	-.0356	.0137	1	-.0698	.1702	-.1111	-.0058	.0206
2	-.2653	.1538	-.0355	-.0276	.0135	2	-.0279	.1729	-.1142	-.0003	.0209
3	-.2089	.1330	-.0359	-.0213	.0142	3	.0419	.1839	-.1204	-.0073	.0214
5	.0829	.1353	-.0458	-.0066	.0148	5	.1451	.1907	-.1309	-.0203	.0230
7	.0696	.1459	-.0653	.0127	.0159	7	.2511	.2058	-.1414	-.0325	.0250
10	.4145	.1744	-.0954	.0523	.0218	10	.4883	.2387	-.1438	-.0587	.0302
15	.7793	.2495	-.1302	.0968	.0354	15	.8510	.3280	-.1975	.1023	.0446
20	.8987	.3596	-.1724	.1119	.0496	20	1.0603	.4693	-.2512	.1297	.0633
25	.8953	.4631	-.1944	.1111	.0603						

TABLE 4 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 4 MODEL - Continued

$$\frac{\delta}{c} = 0.06 \quad \frac{x_2}{c} = 0.60$$

α , deg	C_L	C_D	C_H	C_I	C_n	α , deg	C_L	C_D	C_H	C_I	C_n
$H = 0.60$						$H = 0.95$					
-10	-0.8224	0.2301	0.0368	-0.0985	0.0241	-10	-0.8275	0.3277	0.0322	-0.0989	0.0345
-7	-0.7808	0.1756	-0.0037	-0.0901	0.0169	-7	-0.7012	0.2656	0.0042	-0.0816	0.0272
-5	-0.6452	0.1415	-0.0356	-0.0743	0.0132	-5	-0.6285	0.2222	-0.0049	-0.0740	0.0226
-3	-0.5123	0.1213	-0.0356	-0.0575	0.0105	-3	-0.5432	0.1957	-0.0133	-0.0617	0.0200
-2	-0.4513	0.1144	-0.0257	-0.0504	0.0097	-2	-0.4738	0.1802	-0.0133	-0.0548	0.0184
-1	-0.4043	0.1102	-0.0233	-0.0447	0.0092	-1	-0.4169	0.1724	-0.0167	-0.0471	0.0169
0	-0.3517	0.1077	-0.0233	-0.0373	0.0090	0	-0.3222	0.1677	-0.0272	-0.0368	0.0169
1	-0.2935	0.1036	-0.0257	-0.0306	0.0089	1	-0.2274	0.1724	-0.0412	-0.0253	0.0174
2	-0.2409	0.1049	-0.0233	-0.0245	0.0092	2	-0.1800	0.1600	-0.0342	-0.0203	0.0165
3	-0.1717	0.1036	-0.0184	-0.0168	0.0097	3	-0.0979	0.1647	-0.0482	-0.0100	0.0176
5	-0.0554	0.1049	-0.0147	-0.0027	0.0105	5	-0.0569	0.1647	-0.0517	0.0077	0.0176
7	0.0831	0.1088	-0.0135	0.0124	0.0100	7	-0.2527	0.1724	-0.0657	0.0303	0.0191
10	0.4292	0.1498	-0.0592	0.0511	0.0158	10	0.5938	0.2004	-0.1111	0.0698	0.0264
15	0.6673	0.2343	-0.1041	0.0847	0.0320	15	0.9412	0.3122	-0.1670	0.1123	0.0437
20	0.7199	0.3051	-0.1298	0.0914	0.0391	20	1.0517	0.4210	-0.2263	0.1292	0.0584
25	0.7559	0.3935	-0.1506	0.0938	0.0497	25	1.0833	0.5297	-0.2508	0.1311	0.0707
$H = 0.80$						$H = 1.00$					
-10	-0.8759	0.2605	0.0033	-0.1074	0.0274	-10	-0.7791	0.3221	0.0175	-0.0916	0.0353
-7	-0.7898	0.2053	-0.0075	-0.0945	0.0203	-7	-0.6579	0.2624	-0.0081	-0.0762	0.0282
-5	-0.7374	0.1722	-0.0033	-0.0859	0.0166	-5	-0.5700	0.2281	-0.0195	-0.0659	0.0247
-3	-0.6326	0.1464	-0.0066	-0.0720	0.0137	-3	-0.4638	0.2028	-0.0329	-0.0526	0.0213
-2	-0.5503	0.1344	-0.0016	-0.0625	0.0121	-2	-0.4062	0.1924	-0.0396	-0.0453	0.0203
-1	-0.4866	0.1271	0.0000	-0.0547	0.0114	-1	-0.3486	0.1864	-0.0463	-0.0383	0.0194
0	-0.4267	0.1205	-0.0016	-0.0473	0.0109	0	-0.2789	0.1789	-0.0530	-0.0298	0.0189
1	-0.3556	0.1160	-0.0016	-0.0386	0.0104	1	-0.2031	0.1730	-0.0563	-0.0217	0.0189
2	-0.2845	0.1142	0.0041	-0.0309	0.0106	2	-0.1273	0.1730	-0.0590	-0.0156	0.0189
3	-0.2134	0.1132	0.0049	-0.0227	0.0106	3	-0.0667	0.1730	-0.0631	0.0063	0.0190
5	-0.0674	0.1095	0.0049	-0.0057	0.0112	5	-0.0849	0.1730	-0.0691	0.0118	0.0194
7	0.1011	0.1114	0.0041	0.0130	0.0111	7	-0.2819	0.1804	-0.0778	0.0338	0.0206
10	0.4754	0.1464	-0.0480	0.0561	0.0183	10	0.5851	0.2118	-0.1201	0.0692	0.0275
15	0.7337	0.2366	-0.1068	0.0913	0.0329	15	0.9338	0.3295	-0.1871	0.1111	0.0471
20	0.7898	0.3186	-0.1449	0.0970	0.0424	20	1.1702	0.4861	-0.2408	0.1413	0.0670
$H = 0.85$						$H = 1.05$					
-10	-0.9094	0.2792	0.0257	-0.1125	0.0307	-10	-0.7567	0.3104	0.0175	-0.0893	0.0348
-7	-0.8177	0.2192	0.0211	-0.0997	0.0232	-7	-0.6427	0.2486	-0.0071	-0.0757	0.0277
-5	-0.7543	0.1847	0.0211	-0.0894	0.0189	-5	-0.5609	0.2198	-0.0188	-0.0642	0.0243
-3	-0.6697	0.1542	0.0133	-0.0761	0.0154	-3	-0.4587	0.1955	-0.0317	-0.0511	0.0212
-2	-0.5957	0.1422	0.0109	-0.0676	0.0135	-2	-0.4003	0.1868	-0.0349	-0.0440	0.0200
-1	-0.5287	0.1334	0.0195	-0.0595	0.0129	-1	-0.3418	0.1810	-0.0420	-0.0369	0.0190
0	-0.4617	0.1292	0.0257	-0.0518	0.0119	0	-0.2688	0.1738	-0.0498	-0.0291	0.0187
1	-0.3912	0.1239	0.0219	-0.0419	0.0117	1	-0.1957	0.1681	-0.0543	-0.0209	0.0185
2	-0.3137	0.1221	0.0171	-0.0338	0.0113	2	-0.1373	0.1667	-0.0562	-0.0135	0.0189
3	-0.2326	0.1179	0.0109	-0.0248	0.0113	3	-0.0643	0.1652	-0.0608	-0.0060	0.0192
5	-0.0705	0.1135	0.0023	-0.0056	0.0117	5	-0.0818	0.1667	-0.0640	0.0113	0.0194
7	0.1234	0.1205	-0.0054	0.0171	0.0117	7	-0.2717	0.1738	-0.0737	0.0326	0.0204
10	0.4829	0.1533	-0.0476	0.0565	0.0186	10	0.5639	0.2098	-0.1131	0.0659	0.0268
15	0.7684	0.2471	-0.1177	0.0971	0.0338	15	0.8969	0.3247	-0.1822	0.1060	0.0442
20	0.8318	0.3311	-0.1575	0.1022	0.0441	20	1.1365	0.4870	-0.2482	0.1372	0.0662
$H = 0.90$						$H = 1.10$					
-10	-0.9216	0.3043	0.0567	-0.1123	0.0319	-10	-0.7332	0.2974	0.0192	-0.0853	0.0342
-7	-0.8351	0.2406	0.0515	-0.0993	0.0248	-7	-0.6213	0.2422	-0.0056	-0.0717	0.0277
-5	-0.7519	0.2030	0.0464	-0.0892	0.0203	-5	-0.5373	0.2120	-0.0180	-0.0615	0.0242
-3	-0.6555	0.1735	0.0368	-0.0767	0.0166	-3	-0.4394	0.1872	-0.0273	-0.0492	0.0215
-2	-0.5989	0.1587	0.0383	-0.0690	0.0149	-2	-0.3806	0.1804	-0.0334	-0.0418	0.0200
-1	-0.5257	0.1472	0.0324	-0.0606	0.0139	-1	-0.3246	0.1734	-0.0402	-0.0350	0.0194
0	-0.4359	0.1407	0.0236	-0.0497	0.0132	0	-0.2575	0.1665	-0.0458	-0.0282	0.0190
1	-0.3726	0.1326	0.0236	-0.0416	0.0126	1	-0.1931	0.1625	-0.0532	-0.0207	0.0190
2	-0.2961	0.0491	0.0228	-0.0335	0.0126	2	-0.1315	0.1611	-0.0526	-0.0129	0.0169
3	-0.2296	0.0474	0.0169	-0.0250	0.0124	3	-0.0644	0.1597	-0.0582	-0.0058	0.0190
5	-0.0599	0.1259	0.0022	-0.0052	0.0126	5	-0.0784	0.1597	-0.0613	0.0112	0.0176
7	0.1664	0.1374	-0.0301	0.0210	0.0135	7	-0.2687	0.1734	-0.0737	0.0329	0.0203
10	0.5224	0.1718	-0.0677	0.0614	0.0211	10	0.5261	0.2078	-0.1046	0.0622	0.0265
15	0.8285	0.2667	-0.1266	0.1038	0.0368	15	0.8480	0.3234	-0.1727	0.1009	0.0423
20	0.9050	0.3617	-0.1773	0.1098	0.0480	20	1.0775	0.4762	-0.2377	0.1308	0.0631
25	0.9250	0.4582	-0.1965	0.1110	0.0594						

TABLE 4 - THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 4 MODEL - Continued

$$\frac{x}{c} = 0.06 \quad \frac{x_b}{c} = 0.80$$

α , deg	C_L	C_D	C_N	C_i	$/C_n$	α , deg	C_L	C_D	C_N	C_i	C_n
$M = 0.60$											
-10	-0.9843	0.2523	0.1350	-0.1147	0.0235	-10	-1.0433	0.3343	0.1678	-0.1212	0.0357
-7	-0.9039	0.1883	0.0858	-0.1033	0.0166	-7	-0.8852	0.2643	0.1609	-0.1063	0.0274
-5	-0.7348	0.1500	0.0711	-0.0851	0.0116	-5	-0.7904	0.2254	0.1273	-0.0913	0.0232
-3	-0.5961	0.1267	0.0662	-0.0690	0.0092	-3	-0.6513	0.1944	0.1084	-0.0744	0.0187
-2	-0.5296	0.1173	0.0589	-0.0609	0.0084	-2	-0.5786	0.1710	0.1028	-0.0660	0.0171
-1	-0.4603	0.1090	0.0662	-0.0532	0.0076	-1	-0.4837	0.1633	0.0909	-0.0549	0.0164
0	-0.4020	0.1023	0.0613	-0.0461	0.0069	0	-0.3984	0.1555	0.0804	-0.0449	0.0153
1	-0.3355	0.0982	0.0613	-0.0390	0.0066	1	-0.3320	0.1415	0.0818	-0.0376	0.0140
2	-0.2773	0.0954	0.0662	-0.0323	0.0063	2	-0.2434	0.1399	0.0770	-0.0272	0.0138
3	-0.2080	0.0887	0.0662	-0.0246	0.0061	3	-0.1423	0.1322	0.0713	-0.0169	0.0136
5	-0.0471	0.0846	0.0658	-0.0064	0.0063	5	0.0790	0.1290	0.0489	0.0084	0.0127
7	0.1109	0.0915	0.0613	0.0118	0.0063	7	0.3003	0.1322	0.0105	0.0349	0.0145
10	0.4436	0.0776	0.0000	0.0501	0.0129	10	0.6260	0.1788	-0.0665	0.0725	0.0239
15	0.6627	0.2454	-0.0736	0.0834	0.0280	15	0.9801	0.3187	-0.1469	0.1163	0.0443
20	0.7181	0.3164	-0.1227	0.0902	0.0368	20	1.0275	0.4121	-0.2028	0.1251	0.0564
25	0.7348	0.4023	-0.1350	0.0912	0.0466	25	1.0591	0.5286	-0.2413	0.1262	0.0691
$M = 0.80$											
-10	-1.0342	0.2810	0.1140	-0.1237	0.0255	-10	-0.9772	0.3358	0.1544	-0.1131	0.0363
-7	-0.9408	0.2211	0.0974	-0.1096	0.0184	-7	-0.8497	0.2716	0.1309	-0.0980	0.0286
-5	-0.8618	0.1769	0.0932	-0.0982	0.0141	-5	-0.7435	0.2253	0.1141	-0.0847	0.0236
-3	-0.7045	0.1474	0.0891	-0.0796	0.0107	-3	-0.6069	0.1941	0.1007	-0.0689	0.0199
-2	-0.6183	0.1364	0.0870	-0.0696	0.0097	-2	-0.5311	0.1790	0.0906	-0.0600	0.0180
-1	-0.5433	0.1244	0.0932	-0.0605	0.0086	-1	-0.4552	0.1642	0.0839	-0.0508	0.0166
0	-0.4684	0.1180	0.0937	-0.0523	0.0078	0	-0.3793	0.1567	0.0785	-0.0427	0.0157
1	-0.3897	0.1105	0.0949	-0.0427	0.0072	1	-0.2974	0.1493	0.0739	-0.0339	0.0152
2	-0.3185	0.1042	0.0932	-0.0350	0.0070	2	-0.2124	0.1417	0.0705	-0.0236	0.0148
3	-0.2361	0.0995	0.0932	-0.0259	0.0068	3	-0.1214	0.1388	0.0638	-0.0133	0.0139
5	-0.0487	0.0884	0.0850	-0.0055	0.0074	5	0.1062	0.1388	0.0302	0.0125	0.0139
7	0.1386	0.0967	0.0788	0.0145	0.0078	7	0.3338	0.1493	-0.0134	0.0393	0.0175
10	0.4871	0.1428	0.0083	0.0555	0.0167	10	0.6069	0.1941	-0.0772	0.0715	0.0251
15	0.7232	0.2396	-0.0932	0.0905	0.0322	15	0.9559	0.3284	-0.1611	0.1127	0.0443
20	0.7719	0.3179	-0.1326	0.0955	0.0415	20	1.01744	0.4925	-0.2182	0.1422	0.0667
25	0.7906	0.4127	-0.1512	0.0973	0.0527						
$M = 0.85$											
-10	-1.0578	0.3001	0.1384	-0.1284	0.0312	-10	-0.9476	0.3227	0.1516	-0.1093	0.0354
-7	-0.9661	0.2341	0.1287	-0.1142	0.0232	-7	-0.8164	0.2880	0.1245	-0.0934	0.0275
-5	-0.8891	0.1907	0.1248	-0.1036	0.0183	-5	-0.7143	0.2209	0.1148	-0.0810	0.0229
-3	-0.7581	0.1560	0.1111	-0.0856	0.0141	-3	-0.5744	0.1850	0.0974	-0.0651	0.0192
-2	-0.6699	0.1387	0.1073	-0.0753	0.0125	-2	-0.5102	0.1720	0.0923	-0.0573	0.0176
-1	-0.5785	0.1301	0.1151	-0.0650	0.0114	-1	-0.4374	0.1607	0.0871	-0.0488	0.0161
0	-0.4936	0.1215	0.1150	-0.0552	0.0106	0	-0.3703	0.1506	0.0806	-0.0410	0.0154
1	-0.4055	0.1127	0.1053	-0.0445	0.0096	1	-0.2887	0.1435	0.0742	-0.0318	0.0146
2	-0.3173	0.1075	0.1014	-0.0351	0.0091	2	-0.2041	0.1362	0.0729	-0.0223	0.0142
3	-0.2295	0.1040	0.0959	-0.0252	0.0089	3	-0.0962	0.1319	0.0600	-0.0103	0.0139
5	-0.0282	0.0954	0.0862	-0.0034	0.0088	5	0.1254	0.1362	0.0258	0.0145	0.0139
7	0.1939	0.1075	0.0643	0.0214	0.0094	7	0.3236	0.1491	-0.0129	0.0368	0.0175
10	0.5289	0.1560	0.0200	0.0616	0.0180	10	0.5686	0.1936	-0.0645	0.0655	0.0244
15	0.7686	0.2514	-0.1053	0.0946	0.0332	15	0.9039	0.3226	-0.1548	0.1069	0.0429
20	0.8251	0.3434	-0.1501	0.1010	0.0435	20	1.0171	0.4919	-0.2257	0.1373	0.0653
25	0.8427	0.4421	-0.1697	0.1023	0.0558						
$M = 0.90$											
-10	-1.0891	0.3276	0.1842	-0.1289	0.0327	-10	-0.9046	0.3131	0.1421	-0.1044	0.0351
-7	-0.9992	0.2490	0.1658	-0.1152	0.0250	-7	-0.7818	0.2444	0.1217	-0.0895	0.0271
-5	-0.8859	0.2048	0.1584	-0.1027	0.0198	-5	-0.6980	0.2087	0.1112	-0.0786	0.0235
-3	-0.7494	0.1720	0.1437	-0.0857	0.0153	-3	-0.5612	0.1772	0.0957	-0.0634	0.0196
-2	-0.6661	0.1555	0.1326	-0.0748	0.0137	-2	-0.5026	0.1647	0.0926	-0.0559	0.0182
-1	-0.5662	0.1392	0.1252	-0.0643	0.0120	-1	-0.4300	0.1538	0.0834	-0.0478	0.0169
0	-0.4863	0.1311	0.1186	-0.0546	0.0112	0	-0.3546	0.1442	0.0803	-0.0393	0.0161
1	-0.3997	0.1229	0.1179	-0.0449	0.0105	1	-0.2792	0.1374	0.0741	-0.0305	0.0153
2	-0.3164	0.1196	0.1105	-0.0344	0.0103	2	-0.1954	0.1304	0.0710	-0.0207	0.0149
3	-0.2265	0.1064	0.1068	-0.0255	0.0095	3	-0.0810	0.1236	0.0575	-0.0085	0.0143
5	0.0100	0.1032	0.0773	0.0004	0.0099	5	0.1452	0.1304	0.0185	0.0180	0.0148
7	0.2664	0.1179	0.0368	0.0291	0.0124	7	0.3211	0.1442	-0.0123	0.0346	0.0183
10	0.5995	0.1639	-0.0332	0.0691	0.0213	10	0.5584	0.2623	-0.0648	0.0647	0.0258
15	0.8659	0.2784	-0.1142	0.1055	0.0378	15	0.8795	0.3226	-0.1513	0.1040	0.0437
20	0.8893	0.3604	-0.1695	0.1071	0.0472	20	1.0107	0.4875	-0.2192	0.1338	0.0656
25	0.9159	0.4668	-0.1952	0.1099	0.0606						
$M = 0.95$											
-10	-1.0433	0.3343	0.1678	-0.1212	0.0357	-10	-0.9772	0.3358	0.1544	-0.1131	0.0363
-7	-0.8852	0.2643	0.1609	-0.1063	0.0274	-7	-0.8497	0.2716	0.1309	-0.0980	0.0286
-5	-0.7904	0.2254	0.1273	-0.0913	0.0232	-5	-0.7435	0.2253	0.1141	-0.0847	0.0236
-3	-0.6513	0.1944	0.1084	-0.0744	0.0187	-3	-0.6069	0.1941	0.1007	-0.0689	0.0199
-2	-0.5786	0.1710	0.1028	-0.0660	0.0171	-2	-0.5311	0.1790	0.0906	-0.0600	0.0180
-1	-0.4837	0.1633	0.0909	-0.0549	0.0164	-1	-0.4374	0.1567	0.0785	-0.0427	0.0157
0	-0.3984	0.1555	0.0804	-0.0449	0.0153	0	-0.3793	0.1415	0.0785	-0.0427	0.0157
1	-0.3320	0.1415	0.0818	-0.0376	0.0140	1	-0.2974	0.1393	0.0739	-0.0339	0.0152
2	-0.3122	0.1322	0.0713	-0.0169	0.0136	2	-0.2124	0.1417	0.0705	-0.0236	0.0148
3	-0.3003	0.1322	0.0713	-0.0169	0.0136	3	-0.1214	0.1388	0.0638	-0.0133	0.0139
5	0.0700	0.1260	0.1788	-0.0665	0.0126	5	0.1062	0.1388	0.0302	0.0125	0.0139
7	0.3003	0.1322	0.1788	-0.0665	0.0126	7	0.3338	0.1493	-0.0134	0.0393	0.0175
10	0.6260	0.2620	0.1788	-0.0665	0.0126	10	0.6069	0.1941	-0.0772	0.0715	0.0251
15	0.9801	0.3187	0.1469	-0.1163	0.0443	15	0.9559	0.3284	-0.1611	0.1127	0.0443
20	1.0275	0.4121	0.2028	-0.1251	0.0564	20	1.01744	0.4925	-0.2182	0.1422	0.0667
25	1.0591	0.5286	0.2413	-0.1262</td							

TABLE 4 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 4 MODEL - Concluded

 $\frac{x}{c} = 0.06$ $\frac{x}{c} = 1.00$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
$M = 0.95$											
-10	-1.1859	.2991	.3195	-.1399	.0305	-10	-1.2443	.3684	.3679	-.1441	.0410
-7	-1.1081	.2172	.2273	-.1267	.0213	-7	-1.0697	.2795	.3230	-.1225	.0310
-5	-.9637	.1694	.2113	-.1095	.0157	-5	-.9491	.2295	.3047	-.1079	.0251
-3	-.8137	.1419	.2101	-.0920	.0124	-3	-.7999	.1905	.2837	-.0905	.0207
-2	-.7499	.1353	.2089	-.0843	.0113	-2	-.7142	.1733	.2781	-.0809	.0188
-1	-.6665	.1283	.2113	-.0732	.0100	-1	-.6253	.1592	.2654	-.0709	.0173
0	-.5832	.1216	.2273	-.0657	.0089	0	-.5356	.1482	.2584	-.0612	.0161
1	-.5082	.1147	.2089	-.0576	.0084	1	-.4222	.1389	.2556	-.0489	.0148
2	-.4305	.1080	.2089	-.0499	.0081	2	-.3301	.1281	.2416	-.0385	.0137
3	-.3472	.1011	.2089	-.0405	.0082	3	-.2000	.1217	.1994	-.0239	.0127
5	-.1389	.0903	.1855	-.0175	.0077	5	.0730	.1201	.1376	.0069	.0127
7	.0555	.0917	.1597	.0051	.0074	7	.3016	.1265	.0716	.0339	.0150
10	.4166	.1419	.0553	.0475	.0147	10	.6031	.1857	-.0197	.0705	.0240
15	.6249	.2444	-.0614	.0809	.0305	15	.9650	.3216	-.1194	.1163	.0437
20	.7304	.3249	-.1290	.0947	.0418	20	1.0094	.4138	-.2008	.1271	.0567
25	.7360	.4016	-.1229	.0940	.0510	25	1.1078	.6353	-.2598	.1368	.0733
$M = 0.80$											
$M = 1.00$											
-10	-1.2499	.3128	.2865	-.1499	.0335	-10	-1.2032	.3655	.3571	-.1386	.0409
-7	-1.1561	.2391	.2615	-.1339	.0253	-7	-1.0356	.2772	.3167	-.1183	.0313
-5	-1.0510	.1929	.2491	-.1180	.0191	-5	-.9138	.2277	.3005	-.1042	.0251
-3	-.8483	.1550	.2325	-.0952	.0149	-3	-.7706	.1873	.2830	-.0872	.0213
-2	-.7507	.1421	.2383	-.0838	.0131	-2	-.6792	.1707	.2722	-.0769	.0189
-1	-.6681	.1301	.2366	-.0743	.0118	-1	-.6001	.1573	.2627	-.0677	.0175
0	-.5818	.1237	.2366	-.0651	.0108	0	-.5026	.1453	.2560	-.0573	.0158
1	-.4879	.1145	.2325	-.0547	.0098	1	-.3960	.1333	.2426	-.0451	.0147
2	-.4054	.1088	.2284	-.0451	.0092	2	-.2772	.1258	.2224	-.0333	.0136
3	-.3003	.1015	.2200	-.0342	.0087	3	-.1371	.1153	.1887	-.0174	.0126
5	-.0938	.0914	.1968	-.0105	.0079	5	.1066	.1258	.1172	.0111	.0127
7	.1501	.1015	.1619	.0164	.0084	7	.3198	.1409	.0606	.0351	.0159
10	.4692	.1449	.0664	.0547	.0165	10	.5696	.1902	-.0161	.0658	.0243
15	.7131	.2483	-.0914	.0916	.0335	15	.9442	.3281	.1280	.1120	.0452
20	.7882	.3314	-.1453	.1062	.0433	20	1.1879	.4928	1.2021	.1434	.0662
25	.8145	.4283	-.1661	.1025	.0465	25	1.2123	.6276	-.2830	.1497	.0893
$M = 0.85$											
$M = 1.05$											
-10	-1.2926	.3405	.3266	-.1543	.0358	-10	-1.1598	.3524	.3481	-.1340	.0410
-7	-1.1615	.2596	.3110	-.1341	.0258	-7	-1.0130	.2657	.3118	-.1151	.0311
-5	-1.0270	.2081	.2836	-.1160	.0200	-5	-.8809	.3640	.2923	-.0998	.0256
-3	-.8535	.1680	.2538	-.0954	.0151	-3	-.7341	.1791	.2793	-.0837	.0210
-2	-.7649	.1549	.2538	-.0860	.0134	-2	-.6548	.1646	.2663	-.0741	.0186
-1	-.6764	.1394	.2483	-.0752	.0120	-1	-.5726	.1502	.2598	-.0641	.0171
0	-.5737	.1298	.2381	-.0645	.0110	0	-.4698	.1358	.2468	-.0538	.0157
1	-.4745	.1220	.2295	-.0537	.0101	1	-.3582	.1271	.2299	-.0417	.0147
2	-.3895	.1158	.2232	-.0430	.0095	2	-.2261	.1213	.1949	-.0264	.0138
3	-.2691	.1054	.2060	-.0301	.0086	3	-.0881	.1170	.1559	-.0107	.0137
5	-.0531	.0976	.1864	-.0064	.0082	5	.1263	.1285	.1039	.0128	.0137
7	.1841	.1089	.1441	.0206	.0102	7	.3112	.1445	.0520	.0349	.0171
10	.4958	.1549	.0494	.0584	.0182	10	.5550	.1920	-.0130	.0658	.0249
15	.7472	.2534	-.0987	.0946	.0344	15	.8956	.3234	-.1234	.1069	.0439
20	.8216	.3432	-.1613	.1036	.0445	20	1.1481	.4968	-.2014	.1390	.0674
25	.8357	.4336	-.1754	.1053	.0581	25	1.2186	.6339	-.2728	.1514	.0929
$M = 0.90$											
$M = 1.10$											
-10	-1.2908	.3585	.3595	-.1518	.0402	-10	-1.1135	.3374	.3358	-.1286	.0404
-7	-1.1202	.2680	.3270	-.1295	.0290	-7	-.9617	.2545	.3010	-.1102	.0312
-5	-.9932	.2170	.3018	-.1132	.0235	-5	-.8492	.2116	.2861	-.0973	.0263
-3	-.8460	.1744	.2751	-.0958	.0189	-3	-.7058	.1715	.2612	-.0802	.0216
-2	-.7557	.1612	.2722	-.0852	.0161	-2	-.6299	.1576	.2612	-.0713	.0195
-1	-.6621	.1480	.2663	-.0747	.0158	-1	-.5483	.1438	.2513	-.0621	.0178
0	-.5651	.1364	.2574	-.0637	.0144	0	-.4302	.1300	.2351	-.0495	.0165
1	-.4682	.1349	.2545	-.0532	.0140	1	-.3234	.1175	.2115	-.0365	.0147
2	-.3645	.1251	.2441	-.0422	.0132	2	-.1828	.1147	.1804	-.0215	.0131
3	-.2608	.1135	.2278	-.0304	.0121	3	-.0703	.1106	.1493	-.0092	.0132
5	.0000	.1068	.1731	-.0012	.0117	5	.1265	.1230	.0995	.0153	.0142
7	.2745	.1200	.0917	.0304	.0132	7	.3037	.1438	.0498	.0341	.0175
10	.5819	.1660	.0074	.0686	.0214	10	.5202	.1853	-.0124	.0601	.0250
15	.8895	.2911	-.0962	.1096	.0406	15	.8576	.3194	-.1182	.1017	.0428
20	.9029	.3700	-.1805	.1112	.0492	20	1.0966	.4853	-.0722	.1331	.0649
25	.9296	.4737	-.2012	.1140	.0618	25	1.2513	.6763	-.2687	.1539	.0955

TABLE 5 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 5 MODEL

 $\frac{L}{c} = 0.06$ $\frac{x_a}{c} = \text{NONE}$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
$M = 0.95$											
-10	.6850	.1259	.0492	-.0812	.0089	-10	-.8843	.1977	.1695	-.1020	.0170
-7	-.5516	.0656	-.0148	-.0613	.0027	-7	-.6432	.1791	.0934	-.0734	.0083
-5	-.3959	.0383	-.0167	-.0436	.0008	-5	-.4497	.0711	.0500	-.0520	.0043
-3	-.2402	.0274	-.0142	-.0259	.0002	-3	-.2738	.0464	.0239	-.0307	.0018
-2	-.1690	.0218	-.0138	-.0173	.0000	-2	-.1784	.0371	.0083	-.0190	.0012
-1	-.0845	.0218	-.0142	-.0078	.0002	-1	-.0955	.0309	.0006	-.0093	.0012
0	.0000	.0207	-.0123	.0009	.0004	0	.0000	.0309	-.0044	.0019	.0013
1	.0712	.0218	-.0118	.0104	.0002	1	.0904	.0339	-.0139	.0122	.0014
2	.1468	.0274	-.0099	.0194	.0002	2	.2035	.0383	-.0222	.0241	.0032
3	.2269	.0371	-.0099	.0289	.0008	3	.2990	.0464	-.0328	.0359	.0049
5	.3825	.0547	-.0059	.0471	.0037	5	.4799	.0741	-.0667	.0576	.0092
7	.5249	.0874	-.0128	.0652	.0085	7	.6633	.1082	-.1084	.0785	.0119
10	.6494	.1521	-.0723	.0833	.0178	10	.8944	.1853	-.1778	.1066	.0259
15	.6717	.2406	-.1186	.0941	.0302	15	1.1707	.3521	-.2390	.1483	.0486
20	.6939	.3160	-.1279	.0946	.0399						
25	.7161	.4048	-.1451	.0950	.0511						
$M = 0.80$											
$M = 1.00$											
-10	-.7870	.1502	.0412	-.0946	.0120	-10	-.8281	.1865	.1544	-.0942	.0161
-7	-.6350	.0814	.0033	-.0732	.0051	-7	-.6115	.1154	.0905	-.0694	.0085
-5	-.4740	.0477	-.0066	-.0527	.0017	-5	-.4478	.0799	.0612	-.0512	.0047
-3	-.2862	.0256	-.0095	-.0307	.0006	-3	-.2865	.0544	.0330	-.0316	.0025
-2	-.1908	.0213	-.0004	-.0203	.0003	-2	-.1902	.0444	.0213	-.0206	.0023
-1	-.1014	.0183	-.0033	-.0101	.0003	-1	-.0963	.0385	.0053	-.0096	.0021
0	-.0119	.0183	-.0000	.0006	.0006	0	.0024	.0367	-.0080	.0016	.0020
1	.0566	.0183	-.0007	.0113	.0006	1	.0987	.0385	-.0202	.0119	.0021
2	.1818	.0234	-.0033	.0226	.0016	2	.1950	.0426	-.0346	.0238	.0041
3	.2862	.0294	.0116	.0344	.0026	3	.2913	.0503	-.0506	.0346	.0057
5	.4651	.0477	.0046	.0570	.0058	5	.4694	.0740	-.0772	.0552	.0097
7	.6231	.0844	-.0148	.0764	.0107	7	.6163	.1065	-.1065	.0732	.0144
10	.7632	.1429	-.0511	.0952	.0196	10	.8281	.1775	-.1624	.0991	.0243
15	.7304	.2382	-.1220	.0952	.0316	15	1.1243	.3422	-.2343	.1412	.0466
20	.7691	.3299	-.1451	.0996	.0428						
25	.7989	.4326	-.1649	.1019	.0545						
$M = 0.85$											
$M = 1.05$											
-10	-.7953	.1612	.0610	-.0954	.0126	-10	-.7846	.1787	.1404	-.0892	.0160
-7	-.6497	.0930	.0310	-.0756	.0053	-7	-.5792	.1106	.0878	-.0656	.0086
-5	-.5013	.0550	.0053	-.0560	.0018	-5	-.4361	.0783	.0587	-.0482	.0053
-3	-.3024	.0290	-.0062	-.0324	.0001	-3	-.2746	.0556	.0332	-.0293	.0030
-2	-.2072	.0241	-.0000	-.0218	-.0001	-2	-.1754	.0459	.0179	-.0181	.0024
-1	-.1092	.0207	-.0028	-.0109	-.0001	-1	-.0900	.0408	.0051	-.0081	.0025
0	-.0112	.0172	-.0000	.0008	.0004	0	.0023	.0397	-.0128	.0013	.0025
1	.1120	.0200	-.0000	.0133	.0007	1	.1081	.0426	-.0230	.0134	.0028
2	.2128	.0207	.0046	.0256	.0020	2	.1892	.0482	-.0322	.0235	.0042
3	.2968	.0276	.0016	.0359	.0028	3	.2677	.0539	-.0459	.0327	.0058
5	.5069	.0517	-.0170	.0604	.0069	5	.4292	.0760	-.0740	.0520	.0096
7	.6469	.0909	-.0465	.0797	.0124	7	.5792	.1078	-.1021	.0690	.0143
10	.7869	.1508	-.0697	.0984	.0212	10	.7869	.1760	-.1521	.0941	.0236
15	.7589	.2410	-.1316	.0971	.0327	15	1.0753	.3291	-.2297	.1349	.0446
20	.8149	.3443	-.1579	.1033	.0453						
25	.8429	.4476	-.1796	.1060	.0574						
$M = 0.90$											
$M = 1.10$											
-10	-.8291	.1753	.1022	-.0992	.0144	-10	-.7524	.1692	.1326	-.0847	.0156
-7	-.6442	.1026	.0569	-.0754	.0067	-7	-.5549	.1037	.0825	-.0621	.0190
-5	-.4911	.0650	.0356	-.0569	.0029	-5	-.4151	.0742	.0574	-.0453	.0055
-3	-.3248	.0356	.0204	-.0356	.0006	-3	-.2641	.0518	.0319	-.0269	.0033
-2	-.2192	.0260	.0131	-.0233	.0001	-2	-.1731	.0458	.0196	-.0172	.0026
-1	-.1135	.0227	.0029	-.0113	.0002	-1	-.0954	.0410	.0074	-.0084	.0027
0	.0026	.0195	-.0044	.0010	.0005	0	.0022	.0137	-.0059	.0028	.0028
1	.1083	.0234	-.0131	.0141	.0008	1	.0799	.0137	-.0133	.0116	.0035
2	.2139	.0285	-.0190	.0274	.0021	2	.1798	.0481	-.0295	.0228	.0049
3	.3168	.0356	-.0277	.0382	.0037	3	.2530	.0546	-.0442	.0312	.0063
5	.4885	.0585	-.0409	.0592	.0085	5	.4128	.0775	-.0712	.0498	.0102
7	.6416	.0941	-.0701	.0531	.0138	7	.5571	.1119	-.0982	.0666	.0147
10	.3344	.1656	-.1139	.1031	.0241	10	.7458	.1768	-.1424	.0899	.0234
15	.8476	.2565	-.1519	.1054	.0357	15	1.0232	.3275	-.1964	.1280	.0439
20	.8872	.3662	-.1869	.1102	.0488						
25	.8951	.4739	-.1986	.1107	.0508						

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TABLE 5 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 5 MODEL - Continued

 $\frac{x}{c} = 0.06$ $\frac{x_2}{c} = 0.40$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
$M = 0.95$											
-10	-0.5621	0.2142	-0.0516	-0.0682	0.0236	-10	-0.6738	0.2995	-0.0199	-0.0770	0.0176
-7	-0.6554	0.1742	-0.0565	-0.0783	0.0194	-7	-0.5490	0.2551	-0.0420	-0.0625	0.0290
-5	-0.5843	0.1469	-0.0860	-0.0667	0.0150	-5	-0.4866	0.2172	-0.0530	-0.0552	0.0251
-3	-0.4599	0.1258	-0.0948	-0.0494	0.0126	-3	-0.4367	0.1903	-0.0530	-0.0475	0.0221
-2	-0.4066	0.1198	-0.0894	-0.0418	0.0119	-2	-0.3918	0.1804	-0.0662	-0.0417	0.0209
-1	-0.3488	0.1186	-0.0787	-0.0343	0.0116	-1	-0.3369	0.1743	-0.0662	-0.0334	0.0201
0	-0.2955	0.1169	-0.0811	-0.0274	0.0116	0	-0.2920	0.1657	-0.0696	-0.0286	0.0194
1	-0.2400	0.1169	-0.0860	-0.0203	0.0117	1	-0.1996	0.1620	-0.0751	-0.0194	0.0195
2	-0.1822	0.1198	-0.0826	-0.0132	0.0120	2	-0.1572	0.1620	-0.0806	-0.0116	0.0197
3	-0.1289	0.1229	-0.0791	-0.0063	0.0129	3	-0.0699	0.1682	-0.0861	-0.0024	0.0209
5	-0.0111	0.1284	-0.0841	-0.0067	0.0145	5	-0.0374	0.1767	-0.0916	-0.0121	0.0217
7	-0.0000	0.1393	-0.0777	-0.0203	0.0149	7	-0.1622	0.1804	-0.1027	-0.0262	0.0224
10	-0.4621	0.1622	-0.0811	-0.0606	0.0196	10	-0.5191	0.2025	-0.1270	-0.0683	0.0283
15	-0.7287	0.2431	-0.1135	-0.0943	0.0328	15	-0.8859	0.2909	-0.1303	-0.1168	0.0429
20	-0.7443	0.3168	-0.1366	-0.0962	0.0413	20	-0.0357	0.4013	-0.2020	-0.1362	0.0627
25	-0.7687	0.4044	-0.1449	-0.0973	0.0529	25	-0.0357	0.5118	-0.2241	-0.1352	0.0720
$M = 0.80$											
$M = 1.00$											
-10	-0.5707	0.2433	-0.0471	-0.0347	0.0263	-10	-0.6405	0.2997	-0.0095	-0.0719	0.0346
-7	-0.7450	0.2102	-0.0570	-0.0454	0.0222	-7	-0.5186	0.2491	-0.0455	-0.0561	0.0289
-5	-0.6780	0.1796	-0.0603	-0.0401	0.0181	-5	-0.4254	0.2257	-0.0624	-0.0455	0.0265
-3	-0.5945	0.1480	-0.0702	-0.0334	0.0148	-3	-0.3441	0.2034	-0.0782	-0.0353	0.0239
-2	-0.5513	0.1386	-0.0685	-0.0302	0.0138	-2	-0.2987	0.1963	-0.0878	-0.0297	0.0231
-1	-0.4887	0.0980	-0.0692	-0.0257	0.0132	-1	-0.2390	0.1903	-0.0941	-0.0227	0.0228
0	-0.4142	0.1283	-0.0620	-0.0211	0.0130	0	-0.1745	0.1857	-0.1036	-0.0158	0.0225
1	-0.3427	0.1261	-0.0620	-0.0166	0.0128	1	-0.0980	0.1845	-0.1089	-0.0070	0.0203
2	-0.2757	0.1261	-0.0577	-0.0126	0.0132	2	-0.0454	0.1857	-0.1142	-0.0005	0.0233
3	-0.2012	0.1290	-0.0620	-0.0084	0.0137	3	-0.0239	0.1903	-0.1247	-0.0088	0.0238
5	-0.0641	0.1349	-0.0669	-0.0006	0.0155	5	-0.1434	0.2068	-0.1322	-0.0237	0.0256
7	-0.0671	0.1407	-0.0676	-0.0075	0.0163	7	-0.2629	0.2185	-0.1459	-0.0376	0.0278
10	-0.4589	0.1590	-0.0840	-0.0298	0.0208	10	-0.5735	0.2491	-0.1565	-0.0724	0.0339
15	-0.7599	0.2360	-0.1137	-0.0480	0.0270	15	-0.9320	0.3315	-0.2093	-0.1234	0.0479
20	-0.8106	0.3202	-0.1411	-0.0506	0.0444						
25	-0.8404	0.4206	-0.1674	-0.0522	0.0563						
$M = 0.85$											
$M = 1.05$											
-10	-0.6996	0.2643	-0.0536	-0.0875	0.0293	-10	-0.6162	0.2839	-0.0015	-0.0716	0.0330
-7	-0.7556	0.2299	-0.0210	-0.0935	0.0251	-7	-0.4833	0.2355	-0.0395	-0.0554	0.0277
-5	-0.7276	0.1981	-0.0090	-0.0883	0.0212	-5	-0.3894	0.2106	-0.0623	-0.0440	0.0248
-3	-0.6464	0.1679	-0.0180	-0.0763	0.0176	-3	-0.3161	0.1882	-0.0790	-0.0347	0.0229
-2	-0.5877	0.1500	-0.0303	-0.0676	0.0159	-2	-0.2749	0.1836	-0.0851	-0.0298	0.0222
-1	-0.5261	0.1403	-0.0381	-0.0584	0.0147	-1	-0.2245	0.1791	-0.0952	-0.0238	0.0216
0	-0.4533	0.1335	-0.0390	-0.0492	0.0141	0	-0.1718	0.1768	-0.1003	-0.0171	0.0215
1	-0.3694	0.1335	-0.0350	-0.0391	0.0141	1	-0.1100	0.1768	-0.1079	-0.0098	0.0216
2	-0.3022	0.1307	-0.0365	-0.0302	0.0142	2	-0.0458	0.1768	-0.1120	-0.0027	0.0221
3	-0.2239	0.1307	-0.0452	-0.0204	0.0146	3	-0.0115	0.1825	-0.1181	-0.0051	0.0227
5	-0.0672	0.1363	-0.0637	-0.0022	0.0161	5	-0.1260	0.1938	-0.1282	-0.0191	0.0241
7	-0.0840	0.1445	-0.0746	-0.0152	0.0172	7	-0.2520	0.2073	-0.1388	-0.0331	0.0263
10	-0.4701	0.1637	-0.0922	-0.0592	0.0217	10	-0.5314	0.2355	-0.1459	-0.0641	0.0322
15	-0.7975	0.2436	-0.1248	-0.0989	0.0355	15	-0.8934	0.3199	-0.1992	-0.1125	0.0455
20	-0.8535	0.3330	-0.1541	-0.1054	0.0462						
25	-0.8759	0.4391	-0.1808	-0.1087	0.0586						
$M = 0.90$											
$M = 1.10$											
-10	-0.7124	0.2815	-0.0359	-0.0881	0.0313	-10	-0.5839	0.2622	-0.0029	-0.0680	0.0325
-7	-0.6992	0.2401	-0.0160	-0.0853	0.0270	-7	-0.4627	0.2189	-0.0405	-0.0531	0.0274
-5	-0.6465	0.2063	-0.0140	-0.0779	0.0230	-5	-0.3768	0.1972	-0.0590	-0.0430	0.0248
-3	-0.5831	0.1778	-0.0169	-0.0689	0.0196	-3	-0.3085	0.1810	-0.0492	-0.0342	0.0230
-2	-0.5356	0.1648	-0.0193	-0.0630	0.0179	-2	-0.2622	0.1755	-0.0770	-0.0289	0.0220
-1	-0.4776	0.1519	-0.0254	-0.0553	0.0168	-1	-0.2093	0.1701	-0.0892	-0.0225	0.0217
0	-0.4090	0.1454	-0.0330	-0.0459	0.0160	0	-0.1542	0.1658	-0.0985	-0.0158	0.0215
1	-0.3272	0.1441	-0.0403	-0.0361	0.0160	1	-0.0992	0.1647	-0.1062	-0.0090	0.0215
2	-0.2639	0.1388	-0.0441	-0.0274	0.0161	2	-0.0419	0.1659	-0.1111	-0.0021	0.0218
3	-0.1873	0.1441	-0.0461	-0.0192	0.0163	3	-0.1278	0.1864	-0.1257	-0.0184	0.0238
5	-0.0528	0.1492	-0.0593	-0.0026	0.0176	5	-0.2424	0.1983	-0.1379	-0.0314	0.0258
7	-0.1055	0.1544	-0.0849	-0.0169	0.0187	7	-0.5068	0.2373	-0.1404	-0.0618	0.0316
10	-0.5066	0.1817	-0.1162	-0.0623	0.0245	10	-0.8593	0.3186	-0.1964	-0.1091	0.0446
15	-0.8576	0.2608	-0.1506	-0.1048	0.0387						
20	-0.9314	0.3660	-0.1839	-0.1153	0.0508						
25	-0.9314	0.4652	-0.2002	-0.1140	0.0650						

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TABLE 5 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 5 MODEL - Continued

 $\frac{L}{c} = 0.06$ $\frac{x_e}{c} = 0.60$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
-10	-0.8594	0.2505	0.0513	-0.1047	0.0283	-10	-0.8657	0.3410	0.0276	-0.1032	0.0375
-7	-0.8793	0.1933	0.0171	-0.1034	0.0214	-7	-0.7534	0.2834	0.0124	-0.0882	0.0308
-5	-0.7445	0.1527	-0.0186	-0.0862	0.0164	-5	-0.6786	0.2466	-0.0014	-0.0785	0.0266
-3	-0.5810	0.1277	-0.0193	-0.0661	0.0134	-3	-0.5788	0.2098	-0.0152	-0.0664	0.0226
-2	-0.5346	0.1200	-0.0220	-0.0601	0.0124	-2	-0.5039	0.1976	-0.0207	-0.0579	0.0212
-1	-0.4684	0.1151	-0.0122	-0.0519	0.0117	-1	-0.4416	0.1852	-0.0290	-0.0499	0.0203
0	-0.4131	0.1124	-0.0073	-0.0446	0.0113	0	-0.3792	0.1608	-0.0373	-0.0414	0.0195
1	-0.3468	0.1091	-0.0122	-0.0369	0.0109	1	-0.2894	0.1730	-0.0359	-0.0317	0.0191
2	-0.2850	0.1091	-0.0098	-0.0292	0.0108	2	-0.2046	0.1730	-0.0442	-0.0218	0.0194
3	-0.2143	0.1091	-0.0068	-0.0206	0.0109	3	-0.1447	0.1669	-0.0373	-0.0155	0.0186
5	-0.0707	0.1109	-0.0064	-0.0039	0.0116	5	-0.0200	0.1669	-0.0428	0.0041	0.0190
7	0.0839	0.1140	0.0000	0.0137	0.0116	7	-0.2320	0.1659	-0.0635	0.0295	0.0200
10	0.4927	0.1527	-0.0464	0.0605	0.0182	10	0.6437	0.2159	-0.1214	0.0756	0.0289
15	0.6804	0.2395	-0.0953	0.0884	0.0316	15	0.9680	0.3263	-0.1766	0.1153	0.0458
20	0.7136	0.3108	-0.1173	0.0918	0.0406	20	1.0678	0.4245	-0.2180	0.1327	0.0603
25	0.8572	0.4032	-0.1344	0.0944	0.0262						
$M = 0.80$											
-10	-0.8943	0.2753	0.0426	-0.1095	0.0302	-10	-0.8176	0.3362	0.0238	-0.0961	0.0372
-7	-0.9298	0.2301	0.0197	-0.1024	0.0247	-7	-0.7124	0.2810	-0.0226	-0.0829	0.0311
-5	-0.8499	0.1894	0.0033	-0.0992	0.0200	-5	-0.6263	0.2446	-0.0159	-0.0722	0.0267
-3	-0.7462	0.1537	0.0000	-0.0851	0.0162	-3	-0.5307	0.2152	-0.0278	-0.0599	0.0234
-2	-0.6722	0.1390	-0.0017	-0.0750	0.0145	-2	-0.4590	0.2010	-0.0344	-0.0518	0.0219
-1	-0.5893	0.1318	0.0033	-0.0658	0.0136	-1	-0.3992	0.1952	-0.0383	-0.0443	0.0213
0	-0.5093	0.1245	0.0098	-0.0558	0.0127	0	-0.3251	0.1869	-0.0489	-0.0355	0.0209
1	-0.4235	0.1208	0.0098	-0.0454	0.0124	1	-0.2438	0.1834	-0.0542	-0.0265	0.0206
2	-0.3445	0.1173	0.0115	-0.0368	0.0122	2	-0.1793	0.1799	-0.0553	-0.0183	0.0206
3	-0.2724	0.1173	0.0098	-0.0276	0.0121	3	-0.1004	0.1799	-0.0600	-0.0095	0.0206
5	-0.0948	0.1143	0.0066	-0.0072	0.0125	5	-0.0550	0.1811	-0.0661	0.0088	0.0206
7	0.0533	0.1136	0.0115	0.0101	0.0125	7	-0.2749	0.1869	-0.0767	0.0334	0.0222
10	0.5123	0.1464	-0.0492	0.0615	0.0191	10	0.6287	0.2222	-0.1269	0.0738	0.0295
15	0.7344	0.2410	-0.1032	0.0943	0.0346	15	0.9514	0.3421	-0.1904	0.1128	0.0473
20	0.7729	0.3212	-0.1327	0.0975	0.0432	20	1.1953	0.5008	-0.2395	0.1448	0.0712
25	0.8084	0.4238	-0.1523	0.1012	0.0558	25	1.2479	0.6419	-0.2855	0.1536	0.0856
$M = 0.85$											
-10	-1.0070	0.3003	0.0507	-0.1223	0.0330	-10	-0.7951	0.3246	0.0253	-0.0934	0.0370
-7	-0.9792	0.2469	0.0600	-0.1164	0.0272	-7	-0.6831	0.2637	-0.0015	-0.0796	0.0302
-5	-0.9096	0.2093	0.0615	-0.1078	0.0229	-5	-0.6049	0.2288	-0.0152	-0.0699	0.0263
-3	-0.7983	0.1716	0.0462	-0.0916	0.0180	-3	-0.5018	0.2039	-0.0266	-0.0572	0.0232
-2	-0.7288	0.1573	0.0462	-0.0835	0.0166	-2	-0.4445	0.1927	-0.0304	-0.0501	0.0218
-1	-0.6314	0.1409	0.0338	-0.0710	0.0144	-1	-0.3781	0.1848	-0.0378	-0.0423	0.0210
0	-0.5480	0.1355	0.0400	-0.0616	0.0138	0	-0.3093	0.1758	-0.0446	-0.0340	0.0203
1	-0.4645	0.1273	0.0369	-0.0516	0.0132	1	-0.2337	0.1724	-0.0512	-0.0258	0.0201
2	-0.3839	0.1238	0.0338	-0.0408	0.0129	2	-0.1650	0.1701	-0.0520	-0.0174	0.0200
3	-0.2837	0.1198	0.0200	-0.0294	0.0129	3	-0.0962	0.1701	-0.0570	-0.0091	0.0201
5	-0.1085	0.1184	0.0062	-0.0084	0.0129	5	-0.0573	0.1701	-0.0616	0.0087	0.0203
7	0.1057	0.1238	0.0000	0.0157	0.0132	7	-0.2773	0.1758	-0.0722	0.0336	0.0218
10	0.5230	0.1545	-0.0477	0.0632	0.0204	10	0.5797	0.2130	-0.1158	0.0687	0.0275
15	0.7761	0.2469	-0.1184	0.0983	0.0354	15	0.9074	0.3335	-0.1860	0.1079	0.0458
20	0.8150	0.3324	-0.1462	0.1013	0.0453	20	1.1503	0.4947	-0.2448	0.1410	0.0668
25	0.8429	0.4391	-0.1680	0.1045	0.0578	25	1.2374	0.6334	-0.1394	0.1535	0.0863
$M = 0.90$											
-10	-1.0016	0.3263	0.0638	-0.1189	0.0354	-10	-0.6017	0.3804	0.0651	-0.0892	0.0364
-7	-0.9229	0.2656	0.0725	-0.1084	0.0274	-7	-0.6634	0.2504	-0.0017	-0.0766	0.0296
-5	-0.8416	0.2218	0.0638	-0.0983	0.0232	-5	-0.5841	0.2179	-0.0115	-0.0672	0.0257
-3	-0.7394	0.1818	0.0551	-0.0865	0.0189	-3	-0.4805	0.1919	-0.0236	-0.0548	0.0226
-2	-0.6738	0.1690	0.0449	-0.0771	0.0177	-2	-0.4254	0.1832	-0.0285	-0.0479	0.0215
-1	-0.5952	0.1509	0.0435	-0.0690	0.0155	-1	-0.3637	0.1746	-0.0366	-0.0404	0.0207
0	-0.5218	0.1445	0.0325	-0.0591	0.0148	0	-0.2998	0.1691	-0.0427	-0.0325	0.0202
1	-0.4248	0.1405	0.0290	-0.0479	0.0144	1	-0.2314	0.1637	-0.0488	-0.0248	0.0199
2	-0.3461	0.1367	0.0261	-0.0384	0.0140	2	-0.1653	0.1616	-0.0488	-0.0171	0.0198
3	-0.2674	0.1315	0.0232	-0.0290	0.0140	3	-0.0992	0.1605	-0.0524	-0.0092	0.0198
5	-0.0944	0.1290	0.0087	-0.0084	0.0143	5	-0.0507	0.1637	-0.0568	0.0086	0.0200
7	0.1652	0.1405	-0.0261	0.0209	0.0144	7	-0.2535	0.2228	-0.0695	0.0321	0.0213
10	0.5663	0.1754	-0.0667	0.0664	0.0232	10	0.5466	0.2071	-0.1073	0.0655	0.0282
15	0.8600	0.2656	-0.1348	0.1054	0.0388	15	0.8640	0.3273	-0.1780	0.1034	0.0444
20	0.8862	0.3559	-0.1653	0.1082	0.0485	20	1.0976	0.4824	-0.2097	0.1352	0.0660
25	0.8993	0.4655	-0.1885	0.1102	0.0517	25	1.1726	0.5983	-0.2662	0.1447	0.0810
$M = 1.00$											
-10	-0.7951	0.3246	0.0253	-0.0934	0.0370	-10	-0.6017	0.3804	0.0651	-0.0892	0.0364
-7	-0.6831	0.2637	-0.0015	-0.0766	0.0302	-7	-0.6634	0.2504	-0.0017	-0.0766	0.0296
-5	-0.6049	0.2288	-0.0152	-0.0699	0.0263	-5	-0.5841	0.2179	-0.0115	-0.0672	0.0257
-3	-0.5018	0.2039	-0.0266	-0.0572	0.0232	-3	-0.4805	0.1919	-0.0236	-0.0548	0.0226
-2	-0.4445	0.1927	-0.0304	-0.0501	0.0218	-2	-0.4254	0.1832	-0.0285	-0.0479	0.0215
-1	-0.3781	0.1848	-0.0378	-0.0423	0.0210	-1	-0.3637	0.1746	-0.0366	-0.0404	0.0207
0	-0.3093	0.1758	-0.0446	-0.0340	0.0203	0	-0.2998	0.1691	-0.0427	-0.0325	0.0202
1	-0.2337	0.1724	-0.0512	-0.0258	0.0201	1	-0.2314	0.1637	-0.0488	-0.0248	0.0199
2	-0.1650	0.1701	-0.0520	-0.0174	0.0200	2	-0.1653	0.1616	-0.0488	-0.0171	0.0198
3	-0.0962	0.1701	-0.0616	0.0087	0.0203	3	-0.0992	0.1605	-0.0524	-0.0092	0.0198
5	-0.0573	0.1701	-0.0616	0.0086	0.0200	5	-0.0507	0.1637	-0.0568	0.0086	0.0200
7	-0.2773	0.1758	-0.0722	0.0336	0.0218	7	-0.2535	0.2228	-0.0695	0.0321	0.0213
10	0.5797	0.2130	-0.1158	0.0687	0.0275	10	0.5466	0.2071	-0.1073	0.0655	0.0282
15	0.9074	0.3335	-0.1860	0.1079	0.0458	15	0.8640	0.3273	-0.1780	0.1034	0.0444
20	1.1503	0.4947	-0.2448	0.1410							

TABLE 5 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 5 MODEL - Continued.

 $\frac{x}{c} = 0.06$ $\frac{x_s}{c} = 0.80$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$											
-10	-1.0107	.2750	.1471	-.1219	.0294	-10	-1.0600	.3634	.1679	-.1285	.0405
-7	-1.0151	.1971	.0999	-.1167	.0218	-7	-.9107	.2778	.1266	-.1092	.0316
-5	-.8499	.1526	.0658	-.0971	.0166	-5	-.8111	.2350	.1156	-.0966	.0263
-3	-.6738	.1266	.0570	-.0765	.0135	-3	-.6867	.1946	.1046	-.0802	.0216
-2	-.6077	.1158	.0585	-.0684	.0123	-2	-.6121	.1799	.1018	-.0720	.0199
-1	-.5307	.1105	.0624	-.0599	.0112	-1	-.5250	.1677	.0881	-.0609	.0187
0	-.4558	.1017	.0633	-.0513	.0101	0	-.4354	.1554	.0798	-.0502	.0177
1	-.3985	.0975	.0677	-.0436	.0095	1	-.3508	.1493	.0798	-.0401	.0170
2	-.3215	.0942	.0691	-.0351	.0092	2	-.2662	.1407	.0770	-.0314	.0161
3	-.2532	.0931	.0755	-.0274	.0089	3	-.1742	.1309	.0688	-.0203	.0155
5	-.0771	.0865	.0653	-.0073	.0086	5	-.0597	.1248	.0468	-.0068	.0145
7	.0925	.0898	.0609	.0120	.0084	7	.3583	.1309	-.0094	.0416	.0177
10	.4712	.142	-.0146	.0573	.0170	10	.6643	.1860	-.0881	.0787	.0268
15	.6694	.2338	-.0818	.0877	.0312	15	1.0177	.3267	-.1679	.1237	.0471
20	.7024	.3098	-.1193	.0936	.0406	20	1.0425	.4124	-.2119	.1304	.0606
25	.7222	.3919	-.1267	.0941	.0516						
$M = 0.80$											
$M = 1.00$											
-10	-1.0957	.2956	.1405	-.1310	.0332	-10	-1.0153	.3539	.1555	-.1217	.0401
-7	-1.0514	.2285	.1111	-.1263	.0254	-7	-.8652	.2684	.1186	-.1027	.0313
-5	-.9628	.1867	.1046	-.1110	.0202	-5	-.7722	.2310	.1065	-.0907	.0267
-3	-.8004	.1466	.0849	-.0906	.0157	-3	-.6388	.1922	.0949	-.0750	.0221
-2	-.7118	.1322	.0849	-.0794	.0141	-2	-.5744	.1782	.0896	-.0666	.0205
-1	-.6173	.1212	.0931	-.0682	.0126	-1	-.4981	.1665	.0870	-.0579	.0193
0	-.5346	.1140	.0963	-.0591	.0117	0	-.4171	.1547	.0765	-.0481	.0180
1	-.4460	.1068	.0947	-.0493	.0110	1	-.3241	.1488	.0712	-.0379	.0174
2	-.3603	.1003	.0963	-.0396	.0106	2	-.2360	.1406	.0659	-.0278	.0163
3	-.2747	.0958	.0947	-.0295	.0100	3	-.1430	.1372	.0606	-.0167	.0160
5	-.0620	.0886	.0859	-.0049	.0095	5	.1239	.1348	.0211	.0143	.0157
7	.1447	.0958	.0771	-.0034	.0098	7	.3670	.1430	-.0237	.0417	.0196
10	.5139	.1359	-.0164	.0622	.0183	10	.6459	.1958	-.0923	.0764	.0274
15	.7206	.2302	-.0963	.0926	.0332	15	.9748	.3306	-.1766	.1194	.0468
20	.7679	.3138	-.1329	.0981	.0436						
25	.8063	.4169	-.1522	.1012	.0555						
$M = 0.85$											
$M = 1.05$											
-10	-1.1767	.3201	.1577	-.1433	.0361	-10	-.9713	.3338	.1466	-.1168	.0390
-7	-1.0990	.2470	.1596	-.1309	.0275	-7	-.8387	.2608	.1163	-.1003	.0310
-5	-.9935	.2027	.1627	-.1180	.0221	-5	-.7359	.2203	.1046	-.0874	.0261
-3	-.8576	.1618	.1412	-.0992	.0176	-3	-.6193	.1866	.0960	-.0719	.0220
-2	-.7632	.1433	.1289	-.0873	.0152	-2	-.5508	.1708	.0885	-.0639	.0203
-1	-.6688	.1310	.1228	-.0760	.0138	-1	-.4708	.1596	.0834	-.0550	.0187
0	-.5717	.1207	.1240	-.0652	.0125	0	-.3908	.1483	.0758	-.0457	.0176
1	-.4773	.1139	.1197	-.0539	.0119	1	-.3108	.1427	.0708	-.0364	.0169
2	-.3774	.1071	.1105	-.0415	.0112	2	-.2194	.1337	.0657	-.0253	.0162
3	-.2664	.1017	.0951	-.0307	.0108	3	-.1166	.1304	.0581	-.0142	.0156
5	-.0444	.0914	.0872	-.0045	.0099	5	.1371	.1315	.0152	.0169	.0154
7	.2054	.1024	.0565	.0243	.0115	7	.3519	.1439	-.0243	.0408	.0193
10	.6133	.1494	-.0154	.0711	.0212	10	.6033	.1933	-.0834	.0710	.0265
15	.7604	.2423	-.1191	.0981	.0350	15	.9233	.3226	-.1693	.1127	.0451
20	.8159	.3303	-.1535	.1040	.0328						
25	.8437	.4327	-.1719	.1067	.0578						
$M = 0.90$											
$M = 1.10$											
-10	-1.1349	.3433	.1938	-.1396	.0376	-10	-.9361	.3242	.1434	-.1118	.0379
-7	-1.0277	.3241	.1735	-.1229	.0288	-7	-.8153	.2529	.1166	-.0969	.0305
-5	-.9179	.2790	.1533	-.1087	.0240	-5	-.7098	.2129	.1069	-.0841	.0255
-3	-.7871	.1736	.1417	-.0919	.0191	-3	-.5955	.1805	.0909	-.0700	.0218
-2	-.7087	.1505	.1330	-.0828	.0170	-2	-.5296	.1643	.0875	-.0619	.0198
-1	-.6171	.1375	.1244	-.0721	.0154	-1	-.4527	.1535	.0559	-.0529	.0186
0	-.5308	.1247	.1215	-.0619	.0140	0	-.3758	.1426	.0729	-.0435	.0176
1	-.4341	.1221	.1128	-.0508	.0136	1	-.3011	.1372	.0666	-.0350	.0168
2	-.3452	.1183	.1099	-.0401	.0130	2	-.2219	.1297	.0661	-.0256	.0163
3	-.2510	.1055	.1041	-.0279	.0117	3	-.0945	.1221	.0535	-.0111	.0155
5	-.0026	.0990	.0810	-.0010	.0112	5	.1406	.1319	.0146	-.0171	.0155
7	.3112	.1183	.0202	.0355	.0144	7	.3296	.1448	-.0238	.0388	.0191
10	.6381	.1633	-.0480	.0751	.0111	10	.5692	.1891	-.0778	.0674	.0257
15	.9126	.2726	-.1302	.1132	.0401	15	.8768	.3156	-.1604	.1080	.0432
20	.8865	.3498	-.1735	.1097	.0478						
25	.8734	.4527	-.1851	.1107	.0606						

TABLE 5 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 5 MODEL--Concluded

$$\frac{x_e}{c} = 0.06 \quad \frac{x_e}{c} = 1.00$$

α , deg	c_L	c_D	c_H	c_l	c_n	α , deg	c_L	c_D	c_H	c_l	c_n
$M = 0.60$											
-7	-1.1638	.2239	.2309	-.1367	.0215	-10	-1.3293	.3972	.3606	-.1568	.0437
-5	-1.0439	.1801	.1876	-.1212	.0174	-7	-1.2039	.3207	.3273	-.1412	.0256
-3	-.8795	.1475	.1965	-.1013	.0134	-5	-1.0283	.2528	.3107	-.1213	.0274
-2	-.7907	.1335	.1867	-.0906	.0124	-3	-.8728	.2048	.2929	-.1028	.0224
-1	-.7107	.1277	.1926	-.0832	.0116	-2	-.7775	.1850	.2774	-.0925	.0204
0	-.6308	.1202	.1916	-.0733	.0108	-1	-.6772	.1665	.2663	-.0804	.0183
1	-.5553	.1115	.1891	-.0643	.0104	0	-.5769	.1530	.2463	-.0701	.0163
2	-.4664	.1037	.1867	-.0548	.0093	1	-.4515	.1382	.2497	-.0565	.0152
3	-.3776	.0984	.1843	-.0453	.0088	2	-.3511	.1295	.2386	-.0448	.0134
5	-.1555	.0884	.1523	-.0194	.0083	3	-.2006	.1171	.2108	-.0287	.0128
7	.0800	.0884	.1229	.0056	.0084	5	-.1254	.1135	.1220	.0078	.0128
10	.4664	.1475	-.0049	.0530	.0167	7	.3511	.1196	.0488	.0356	.0154
15	.6574	.2459	-.0909	.0841	.0317	10	.6822	.1912	-.0499	.0769	.0258
20	.7329	.3256	-.1499	.0953	.0413	15	1.0333	.3269	.1498	.1218	.0455
25	.7329	.4096	-.1616	.0953	.0519	20	1.0534	.4194	-.2219	.1266	.0583
						25	1.0534	.5303	-.2386	.1266	.0712
$M = 0.95$											
-10	-1.2508	.3529	.2767	-.1677	.0385	-10	-1.2738	.3960	.3562	-.1507	.0430
-7	-1.1466	.2622	.2569	-.1509	.0280	-7	-1.1152	.3002	.3136	-.1321	.0332
-5	-.9854	.2088	.2503	-.1359	.0217	-5	-.9854	.2459	.3030	-.1162	.0268
-3	-.9679	.1669	.2306	-.1128	.0170	-3	-.8171	.1985	.2785	-.0975	.0218
-2	-.8369	.1494	.2207	-.0983	.0150	-2	-.7258	.1833	.2733	-.0877	.0196
-1	-.7416	.1355	.2273	-.0867	.0139	-1	-.6441	.1631	.2637	-.0770	.0178
0	-.6403	.1245	.2240	-.0758	.0126	0	-.5383	.1478	.2573	-.0658	.0160
1	-.5361	.1157	.2174	-.0648	.0118	2	-.4326	.1359	.2446	-.0541	.0145
2	-.4348	.1069	.2141	-.0532	.0108	3	-.3028	.1241	.2233	-.0392	.0132
3	-.3276	.0989	.2042	-.0411	.0100	3	-.1250	.1182	.1754	-.0205	.0132
5	-.0655	.0879	.1779	-.0121	.0093	5	-.1538	.1241	.0957	.0121	.0140
7	.1906	.0989	.1416	.0168	.0098	7	.3653	.1418	.0372	.0378	.0177
10	.5390	.1435	-.0099	.0613	.0193	10	.6489	.1950	-.0436	.0719	.0257
15	.7267	.2380	-.0935	.0902	.0335	15	1.2497	.3368	-.1510	.1181	.0456
20	.8011	.3260	-.1515	.0989	.0436	20	1.2497	.5023	-.2233	.1148	.0693
25	.8309	.4321	-.1713	.1018	.0561						
$M = 0.80$											
-10	-1.3551	.3529	.2767	-.1677	.0385	-10	-1.2738	.3960	.3562	-.1507	.0430
-7	-1.2508	.2622	.2569	-.1509	.0280	-7	-1.1152	.3002	.3136	-.1321	.0332
-5	-.9854	.2088	.2503	-.1359	.0217	-5	-.9854	.2459	.3030	-.1162	.0268
-3	-.9679	.1669	.2306	-.1128	.0170	-3	-.8171	.1985	.2785	-.0975	.0218
-2	-.8369	.1494	.2207	-.0983	.0150	-2	-.7258	.1833	.2733	-.0877	.0196
-1	-.7416	.1355	.2273	-.0867	.0139	-1	-.6441	.1631	.2637	-.0770	.0178
0	-.6403	.1245	.2240	-.0758	.0126	0	-.5383	.1478	.2573	-.0658	.0160
1	-.5361	.1157	.2174	-.0648	.0118	2	-.4326	.1359	.2446	-.0541	.0145
2	-.4348	.1069	.2141	-.0532	.0108	3	-.3028	.1241	.2233	-.0392	.0132
3	-.3276	.0989	.2042	-.0411	.0100	3	-.1250	.1182	.1754	-.0205	.0132
5	-.0655	.0879	.1779	-.0121	.0093	5	-.1538	.1241	.0957	.0121	.0140
7	.1906	.0989	.1416	.0168	.0098	7	.3653	.1418	.0372	.0378	.0177
10	.5390	.1435	-.0099	.0613	.0193	10	.6489	.1950	-.0436	.0719	.0257
15	.7267	.2380	-.0935	.0902	.0335	15	1.2497	.3368	-.1510	.1181	.0456
20	.8011	.3260	-.1515	.0989	.0436	20	1.2497	.5023	-.2233	.1148	.0693
25	.8309	.4321	-.1713	.1018	.0561						
$M = 0.85$											
-10	-1.3703	.3714	.3217	-.1673	.0397	-10	-1.2218	.3854	.3457	-.1441	.0420
-7	-1.2920	.2806	.3093	-.1537	.0502	-7	-1.0604	.2879	.3111	-.1253	.0320
-5	-.9169	.2269	.3093	-.1396	.0239	-5	-.9267	.2381	.2958	-.1106	.0258
-3	-.10068	.1760	.2808	-.1162	.0185	-3	-.7838	.1916	.2753	-.0927	.0211
-2	-.8949	.1581	.2722	-.1043	.0163	-2	-.6916	.1723	.2651	-.0828	.0191
-1	-.7607	.1444	.2648	-.0896	.0143	-1	-.6086	.1576	.2550	-.0734	.0172
0	-.6712	.1306	.2549	-.0787	.0133	0	-.5072	.1418	.2488	-.0609	.0155
1	-.5593	.1183	.2474	-.0668	.0124	1	-.3688	.1270	.2264	-.0470	.0139
2	-.4251	.1100	.2289	-.0527	.0108	2	-.2305	.1191	.1897	-.0300	.0129
3	-.2797	.0990	.2072	-.0369	.0098	3	-.0876	.1134	.1499	-.0143	.0132
5	-.0280	.0893	.1763	-.0087	.0095	5	.1429	.1224	.0867	.0125	.0139
7	.2517	.1032	.1175	.0223	.0113	7	.3642	.1372	.0357	.0367	.0178
10	.6432	.1581	.0136	.0679	.0208	10	.6178	.1882	-.0458	.0685	.0252
15	.7830	.2545	-.1206	.0950	.0354	15	.9636	.3197	-.1387	.1110	.0434
20	.8446	.3438	-.1689	.1032	.0458	20	1.1987	.4954	-.2243	.1432	.0682
25	.8669	.4470	-.1856	.1048	.0583						
$M = 0.90$											
-10	-1.3707	.3865	.3557	-.1633	.0417	-10	-1.1619	.3653	.3335	-.1382	.0407
-7	-1.1809	.2917	.3289	-.1449	.0319	-7	-1.0200	.2770	.3041	-.1206	.0315
-5	-.1018	.2333	.3067	-.1290	.0257	-5	-.9003	.2235	.2805	-.1059	.0258
-3	-.9226	.1893	.2915	-.1085	.0207	-3	-.7539	.1799	.2648	-.0891	.0211
-2	-.8224	.1686	.2799	-.0973	.0184	-2	-.6652	.1635	.2550	-.0792	.0191
-1	-.7381	.1491	.2682	-.0865	.0163	-1	-.5765	.1472	.2502	-.0698	.0173
0	-.6274	.1426	.2624	-.0747	.0153	0	-.4790	.1364	.2452	-.0590	.0153
1	-.5008	.1348	.2507	-.0619	.0141	1	-.3326	.1200	.2079	-.0426	.0136
2	-.3954	.1166	.2391	-.0497	.0123	2	-.1774	.1134	.1717	-.0254	.0130
3	-.2636	.1064	.2216	-.0358	.0110	3	-.0443	.1091	.1324	-.0095	.0129
5	.0527	.0973	.1516	.0005	.0108	5	.1641	.1211	.0785	.0133	.0135
7	.3427	.1102	.0700	.0328	.0135	7	.3326	.1364	.0314	.0349	.0170
10	.6695	.1686	-.0233	.0752	.0234	10	.5677	.1854	-.0343	.0637	.0232
15	.8699	.2723	-.1306	.1039	.0386	15	.9136	.3108	-.1373	.1072	.0410
20	.9226	.3630	-.1866	.1095	.0487	20	1.1530	.4940	-.2158	.1373	.0650
25	.9226	.4667	-.1982	.1106	.0625						
$M = 1.10$											
-10	-1.1619	.3653	.3335	-.1382	.0407	-10	-1.0200	.2770	.3041	-.1206	.0315
-7	-.9003	.2235	.2805	-.1059	.0258	-7	-.7539	.1799	.2648	-.0891	.0211
-5	-.7539	.1799	.2648	-.0891	.0211	-5	-.6652	.1635	.2550	-.0792	.0191
-3	-.5765	.1472	.2502	-.0698	.0173	-3	-.4790	.1364	.2452	-.0590	.0153
-2	-.3326	.1200	.2079	-.0426	.0136	-2	-.1774	.1134	.1717	-.0254	.0130
-1	-.1326	.1091	.1324	-.0095	.0129	-1	-.0443	.1091	.1324	-.0095	.0129
0	-.1326	.1211	.0785	.0133	.0135	0	.1641	.1211	.0785	.0133	.0135
1	-.1326	.1364	.0314	.0349	.0170	1	.3326	.1364	.0314	.0349	.0170
2	-.1326	.1854	-.0343	.0637	.0232	2	.5677	.1854	-.0343	.0637	.0232
3	-.1326	.3108	-.1373	.1072	.0410	3	.9136	.3108	-.1373	.1072	.0410
5	-.1326	.4940	-.2158	.1373	.0						

TABLE 6 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 6 MODEL -

 $\frac{b}{c} = 0.06$ $\frac{x_2}{c} = \text{NONE}$

α , deg	c_L	c_D	c_M	c_I	c_n	α , deg	c_L	c_D	c_M	c_I	c_n
$M = 0.60$											
-10	-.7202	.1236	.0538	-.0866	.0148	-10	-.9217	.1973	.1877	-.1088	.0223
-7	-.5967	.0612	-.0103	-.0684	.0071	-7	-.6703	.1112	.1066	-.0780	.0122
-5	-.4377	.0290	.0021	-.0487	.0030	-5	-.4923	.0726	.0695	-.0566	.0071
-3	-.2712	.0170	-.0170	-.0291	.0015	-3	-.2933	.0402	.0301	-.0339	.0037
-2	-.1871	.0133	-.0186	-.0191	.0007	-2	-.1990	.0340	.0162	-.0217	.0028
-1	-.0935	.0097	-.0186	-.0094	.0003	-1	-.1047	.0263	.0047	-.0108	.0022
0	-.0131	.0092	-.0162	.0006	.0003	0	.0000	.0237	-.0056	.0017	.0022
1	.0748	.0123	-.0174	.0115	.0004	1	.0964	.0288	-.0162	.0136	.0026
2	.1515	.0174	-.0170	.0206	.0010	2	.2095	.0314	-.0301	.0264	.0040
3	.2432	.0253	-.0141	.0321	.0020	3	.3037	.0392	-.0417	.0376	.0052
5	.3947	.0410	-.0062	.0518	.0046	5	.5028	.0623	-.0765	.0614	.0099
7	.5574	.0741	-.0186	.0708	.0097	7	.6829	.1025	-.1205	.0834	.0160
10	.6884	.1407	-.0786	.0887	.0188	10	.9301	.1808	-.1877	.1142	.0279
15	.6996	.2282	-.1266	.0978	.0322						
20	.7108	.3090	-.1241	.0978	.0434						
25	.7389	.3983	-.1345	.0990	.0554						
$M = 0.80$											
-10	-.8232	.1491	.0662	-.1013	.0166	-10	-.8527	.1860	.1731	-.1903	.0217
-7	-.6810	.0797	.0193	-.0803	.0084	-7	-.6280	.1115	.1021	-.0730	.0123
-5	-.5338	.0412	-.0005	-.0610	.0041	-5	-.4715	.0745	.0688	-.0559	.0078
-3	-.3243	.0178	-.0083	-.0351	.0015	-3	-.2999	.0484	.0355	-.0325	.0046
-2	-.2120	.0122	-.0027	-.0226	.0008	-2	-.1906	.0399	.0222	-.0208	.0037
-1	-.1123	.0099	-.0014	-.0105	.0005	-1	-.0903	.0340	.0045	-.0088	.0033
0	-.0050	.0074	-.0011	.0016	.0004	0	.0080	.0301	-.0080	.0023	.0030
1	.1023	.0099	-.0019	.0178	.0007	1	.1003	.0326	-.0200	.0133	.0034
2	.2095	.0128	-.0027	.0266	.0014	2	.2107	.0380	-.0377	.0263	.0046
3	.3143	.0160	-.0052	.0392	.0028	3	.3050	.0444	-.0546	.0377	.0066
5	.5363	.0405	-.0061	.0666	.0064	5	.4815	.0686	-.0843	.0591	.0103
7	.6735	.0773	-.0290	.0852	.0116	7	.6420	.1021	-.1154	.0782	.0157
10	.8132	.1417	-.0621	.1050	.0213	10	.8647	.1757	-.1740	.1065	.0266
15	.7409	.2300	-.1228	.1001	.0332						
20	.7908	.3202	-.1435	.1033	.0487						
$M = 0.85$											
-10	-.8188	.1847	.0841	-.1011	.0177	-10	-.8005	.1756	.1554	-.0934	.0203
-7	-.6855	.0875	.0433	-.0821	.0097	-7	-.5946	.1051	.0936	-.0688	.0121
-5	-.5451	.0495	.0233	-.0632	.0050	-5	-.4387	.0710	.0638	-.0498	.0078
-3	-.3509	.0201	.0039	-.0390	.0017	-3	-.2675	.0464	.0319	-.0299	.0049
-2	-.2340	.0092	-.0008	.0125	.0007	-2	-.1828	.0393	.0200	-.0193	.0039
-1	-.1123	.0063	-.0000	-.0114	.0005	-1	-.0885	.0345	.0064	-.0087	.0037
0	-.0000	.0063	-.0003	.0019	.0004	0	.0077	.0313	-.0085	.0022	.0034
1	.1100	.0092	-.0034	.0148	.0010	1	.0962	.0336	-.0213	.0131	.0038
2	.2386	.0132	-.0026	.0299	.0017	2	.1886	.0407	-.0345	.0243	.0048
3	.3509	.0190	-.0078	.0432	.0035	3	.2771	.0478	-.0511	.0352	.0065
5	.5498	.0471	-.0362	.0685	.0076	5	.4522	.0691	-.0779	.0557	.0105
7	.6902	.0840	-.0569	.0863	.0132	7	.6004	.1022	-.1085	.0741	.0154
10	.8422	.1502	-.0841	.1071	.0229	10	.8082	.1708	-.1618	.1000	.0255
15	.7837	.2364	-.1371	.1033	.0349						
20	.8539	.3578	-.1604	.1075	.0493						
25	.8656	.4326	-.1749	.1102	.0629						
$M = 0.90$											
-10	-.8018	.1919	.1388	-.1072	.0208	-10	-.7678	.1665	.1473	-.0895	.0195
-7	-.6828	.0942	.0804	-.0809	.0111	-7	-.5680	.1019	.0929	-.0653	.0118
-5	-.5197	.0574	.0511	-.0613	.0061	-5	-.4200	.0687	.0634	-.0479	.0077
-3	-.3347	.0276	.0292	-.0385	.0026	-3	-.2572	.0450	.0319	-.0278	.0048
-2	-.2422	.0195	.0195	-.0271	.0014	-2	-.1739	.0391	.0205	-.0180	.0042
-1	-.1211	.0141	.0073	-.0132	.0010	-1	-.0833	.0346	.0041	-.0075	.0039
0	.0066	.0113	.0049	-.0021	.0009	0	.0056	.0323	-.0061	.0030	.0037
1	.1101	.0141	-.0146	.0153	.0014	1	.0925	.0346	-.0217	.0135	.0041
2	.2312	.0206	-.0244	.0296	.0028	2	.1758	.0401	-.0327	.0237	.0052
3	.3325	.0282	-.0341	.0413	.0043	3	.2646	.0450	-.0483	.0338	.0070
5	.5241	.0520	-.0609	.0645	.0090	5	.4329	.0692	-.0757	.0539	.0102
7	.6848	.0898	-.0901	.0848	.0151	7	.5735	.1051	-.1043	.0718	.0156
10	.8940	.1629	-.1364	.1108	.0260	10	.7733	.1697	-.1535	.0961	.0245
$M = 1.10$											
-10	-.7678	.1665	.1473	-.0895	.0195						
-7	-.5680	.1019	.0929	-.0653	.0118						
-5	-.4200	.0687	.0634	-.0479	.0077						
-3	-.2572	.0450	.0319	-.0278	.0048						
-2	-.1739	.0391	.0205	-.0180	.0042						
-1	-.0833	.0346	.0041	-.0075	.0039						
0	.0056	.0323	-.0061	.0030	.0037						
1	.0925	.0346	-.0217	.0135	.0041						
2	.1758	.0401	-.0327	.0237	.0052						
3	.2646	.0450	-.0483	.0338	.0070						
5	.4329	.0692	-.0757	.0539	.0102						
7	.5735	.1051	-.1043	.0718	.0156						
10	.7733	.1697	-.1535	.0961	.0245						

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TABLE 6 - THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 6 MODEL - Continued

 $\frac{t}{c} = 0.06$ $\frac{x_e}{c} = 0.40$

α , deg	c_L	c_D	c_M	c_I	c_n	α , deg	c_L	c_D	c_M	c_I	c_n
$M = 0.60$						$M = 0.95$					
-10	-0.6065	0.2246	-0.0314	-0.0739	0.0261	-10	-0.7015	0.3213	-0.0003	-0.0840	0.0404
-7	-0.7300	0.1877	-0.0398	-0.0866	0.0213	-7	-0.5671	0.2644	-0.0455	-0.0576	0.0326
-5	-0.6851	0.1511	-0.0646	-0.0794	0.0170	-5	-0.4831	0.2376	-0.0630	-0.0564	0.0293
-3	-0.5354	0.1265	-0.0795	-0.0582	0.0138	-3	-0.4096	0.2076	-0.0769	-0.0479	0.0261
-2	-0.4755	0.1192	-0.0812	-0.0503	0.0132	-2	-0.3676	0.1973	-0.0827	-0.0428	0.0246
-1	-0.4118	0.1146	-0.0812	-0.0430	0.0129	-1	-0.3151	0.1869	-0.0897	-0.0360	0.0236
0	-0.3557	0.1123	-0.0745	-0.0339	0.0128	0	-0.2521	0.1818	-0.0966	-0.0279	0.0230
1	-0.2920	0.1123	-0.0812	-0.0267	0.0129	1	-0.1680	0.1766	-0.1083	-0.0187	0.0228
2	-0.2321	0.1146	-0.0696	-0.0194	0.0132	2	-0.0945	0.1766	-0.1120	-0.0092	0.0233
3	-0.1572	0.1151	-0.0596	-0.0109	0.0139	3	-0.0315	0.1766	-0.1189	-0.0014	0.0236
5	-0.0487	0.1247	-0.0779	0.0030	0.0155	5	-0.1155	0.1942	-0.1329	0.0163	0.0261
7	0.0749	0.1553	-0.0762	0.0168	0.0167	7	-0.2626	0.2128	-0.1515	0.0347	0.0293
10	0.1380	0.1533	-0.0828	0.0600	0.0203	10	-0.6259	0.2542	-0.1701	0.0768	0.0371
15	0.7225	0.2375	-0.1044	0.0957	0.0347	15	-0.9977	0.3316	-0.2119	0.1241	0.0502
20	0.7300	0.3139	-0.1176	0.0981	0.0431	20	1.1973	0.4659	-0.2425	0.1475	0.0684
25	0.7487	0.4013	-0.1308	0.0987	0.0535						
$M = 0.80$						$M = 1.00$					
-10	-0.5492	0.2339	-0.0342	-0.0711	0.0285	-10	-0.6739	0.3126	-0.0002	-0.0801	0.0382
-7	-0.8238	0.2154	-0.0232	-0.1046	0.0256	-7	-0.5432	0.2582	-0.0443	-0.0638	0.0320
-5	-0.7788	0.1847	-0.0232	-0.0977	0.0218	-5	-0.4627	0.2305	-0.0625	-0.0537	0.0289
-3	-0.6815	0.1479	-0.0397	-0.0820	0.0174	-3	-0.3782	0.2087	-0.0792	-0.0436	0.0262
-2	-0.6390	0.1357	-0.0397	-0.0747	0.0160	-2	-0.3219	0.1395	-0.0881	-0.0365	0.0253
-1	-0.5691	0.1216	-0.0508	-0.0650	0.0145	-1	-0.2615	0.1939	-0.0970	-0.0293	0.0245
0	-0.4743	0.1166	-0.0508	-0.0533	0.0142	0	-0.1972	0.1890	-0.1048	-0.0215	0.0240
1	-0.3969	0.1123	-0.0497	-0.0432	0.0142	1	-0.1207	0.1840	-0.1184	-0.0127	0.0240
2	-0.3145	0.1136	-0.0497	-0.0335	0.0143	2	-0.0302	0.1850	-0.1246	-0.0039	0.0242
3	-0.2371	0.1142	-0.0508	-0.0238	0.0150	3	-0.0101	0.1890	-0.1317	0.0049	0.0250
5	-0.0849	0.1234	-0.0563	-0.0053	0.0165	5	-0.1469	0.2038	-0.1428	0.0202	0.0271
7	0.0474	0.1302	-0.0574	0.0105	0.0179	7	-0.2716	0.2187	-0.1540	0.0355	0.0296
10	0.4493	0.1473	-0.0673	0.0574	0.0213	10	-0.5995	0.2572	-0.1673	0.0736	0.0357
15	0.7614	0.2278	-0.0961	0.0973	0.0342						
20	0.8113	0.3155	-0.1259	0.1026	0.0445						
$M = 0.85$						$M = 1.05$					
-10	-0.7377	0.2655	-0.0365	-0.0951	0.0320	-10	-0.6464	0.2998	-0.0008	-0.0771	0.0369
-7	-0.8009	0.2309	-0.0158	-0.1016	0.0280	-7	-0.5267	0.2486	-0.0418	-0.0618	0.0337
-5	-0.7845	0.2021	-0.0127	-0.0978	0.0243	-5	-0.4476	0.2239	-0.0589	-0.0518	0.0292
-3	-0.7260	0.1705	-0.0130	-0.0879	0.0203	-3	-0.3627	0.2050	-0.0760	-0.0415	0.0257
-2	-0.6838	0.1532	-0.0098	-0.0815	0.0184	-2	-0.3087	0.1955	-0.0813	-0.0353	0.0247
-1	-0.6206	0.1388	-0.0023	-0.0728	0.0168	-1	-0.2508	0.1888	-0.0941	-0.0278	0.0242
0	-0.5269	0.1273	-0.0145	-0.0606	0.0158	0	-0.1853	0.1851	-0.1026	-0.0197	0.0236
1	-0.4215	0.1227	-0.0249	-0.0477	0.0154	1	-0.1196	0.1813	-0.1140	-0.0119	0.0235
2	-0.3419	0.1221	-0.0249	-0.0379	0.0156	2	-0.0502	0.1813	-0.1204	-0.0041	0.0238
3	-0.2693	0.1227	-0.0288	-0.0288	0.0161	3	-0.0096	0.1860	-0.1263	0.0041	0.0244
5	-0.0937	0.1279	-0.0547	-0.0076	0.0172	5	-0.1351	0.2002	-0.1370	0.0187	0.0265
7	0.0703	0.1382	-0.0676	0.0125	0.0189	7	-0.2605	0.2145	-0.1481	0.0340	0.0289
10	0.4450	0.1589	-0.0850	0.0568	0.0226	10	-0.5595	0.2524	-0.1541	0.0684	0.0351
15	0.7962	0.2358	-0.1137	0.1008	0.0352						
20	0.8665	0.3351	-0.1456	0.1088	0.0499						
25	0.8782	0.4330	-0.1637	0.1099	0.0599						
$M = 0.90$						$M = 1.10$					
-10	-0.7589	0.2975	-0.0197	-0.0929	0.0358	-10	-0.6217	0.2884	-0.0023	-0.0742	0.0360
-7	-0.7303	0.2499	-0.0003	-0.0893	0.0299	-7	-0.5103	0.2419	-0.0372	-0.0601	0.0324
-5	-0.6709	0.2228	-0.0075	-0.0815	0.0260	-5	-0.4361	0.2191	-0.0556	-0.0504	0.0273
-3	-0.6049	0.1828	-0.0124	-0.0726	0.0222	-3	-0.3526	0.1980	-0.0710	-0.0399	0.0252
-2	-0.5609	0.1687	-0.0136	-0.0673	0.0206	-2	-0.2969	0.1917	-0.0772	-0.0333	0.0242
-1	-0.5059	0.1526	-0.0221	-0.0602	0.0192	-1	-0.2412	0.1834	-0.0884	-0.0264	0.0234
0	-0.4422	0.1472	-0.0282	-0.0515	0.0191	0	-0.1856	0.1789	-0.0967	-0.0198	0.0230
1	-0.3740	0.1396	-0.0355	-0.0402	0.0190	1	-0.1169	0.1761	-0.1092	-0.0117	0.0230
2	-0.2750	0.1407	-0.0416	-0.0303	0.0191	2	-0.0557	0.1789	-0.1149	-0.0042	0.0235
3	-0.2156	0.1363	-0.0440	-0.0224	0.0192	3	-0.0074	0.1825	-0.1215	0.0036	0.0237
5	-0.0704	0.1418	-0.0550	-0.0053	0.0195	5	-0.1262	0.1962	-0.1318	0.0189	0.0249
7	0.0880	0.1526	-0.0781	0.0153	0.0194	7	-0.2412	0.2108	-0.1416	0.0324	0.0272
10	0.4949	0.1958	-0.1294	0.0662	0.0277	10	-0.5289	0.2474	-0.1482	0.0658	0.0335
15	0.8601	0.2607	-0.1197	0.1089	0.0388						
20	0.9459	0.3635	-0.1732	0.1196	0.0546						
25	0.9349	0.4609	-0.1854	0.1171	0.0648						

TABLE 6 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 6 MODEL - Continued

$$\frac{k}{a} = 0.06 \quad \frac{x_b}{c} = 0.60$$

α , deg	c_L	c_D	c_H	c_z	c_n	α , deg	c_L	c_D	c_H	c_z	c_n
$M = 0.60$											
-10	-.9209	.2736	.0565	-.1113	.0296	-10	-.8626	.3631	.0186	-.1021	.0421
-7	-.9472	.2071	.0399	-.1113	.0219	-7	-.7364	.2908	-.0047	-.0868	.0343
-5	-.8382	.1618	-.0083	-.0955	.0168	-5	-.6459	.2546	-.0186	-.0759	.0295
-3	-.6465	.1312	-.0316	-.0718	.0137	-3	-.5575	.2214	-.0279	-.0647	.0256
-2	-.5751	.1239	-.0199	-.0626	.0124	-2	-.5049	.2069	-.0307	-.0582	.0238
-1	-.5037	.1146	-.0233	-.0547	.0119	-1	-.4355	.1977	-.0326	-.0500	.0227
0	-.4398	.1118	-.0199	-.0462	.0114	0	-.3577	.1873	-.0372	-.0409	.0219
1	-.3684	.1071	-.0199	-.0383	.0109	1	-.2798	.1800	-.0419	-.0310	.0214
2	-.2969	.1054	-.0199	-.0304	.0109	2	-.2062	.1769	-.0438	-.0218	.0212
3	-.2293	.1045	-.0193	-.0213	.0111	3	-.1304	.1748	-.0512	-.0129	.0212
5	-.0827	.1017	-.0166	-.0030	.0119	5	.0463	.1748	-.0605	.0082	.0219
7	.0752	.1064	-.0133	-.0152	.0119	7	.2840	.1790	-.0745	.0354	.0233
10	.5150	.1460	-.0632	-.0657	.0189	10	.6733	.2183	-.1303	.0814	.0305
15	.6954	.2781	-.1131	-.0924	.0318	20	.7367	.3114	-.1297	-.0973	.0420
20	.7367	.3114	-.1297	-.0973	.0420	25	.7705	.4048	-.1430	-.1004	.0532
$M = 0.80$											
-10	-1.0326	.3094	.0399	-.1278	.0343	-10	-.8302	.3558	.0205	-.0972	.0395
-7	-1.0075	.2515	.0543	-.1217	.0272	-7	-.7154	.2884	-.0045	-.0828	.0331
-5	-.9424	.2108	.0488	-.1095	.0225	-5	-.6267	.2537	-.0169	-.0724	.0289
-3	-.8221	.1701	.0366	-.0925	.0178	-3	-.5340	.2220	-.0330	-.0603	.0255
-2	-.7318	.1491	.0177	-.0811	.0157	-2	-.4736	.2091	-.0401	-.0531	.0242
-1	-.6366	.1343	.0133	-.0689	.0141	-1	-.4131	.1992	-.0401	-.0450	.0230
0	-.5489	.1269	.0200	-.0596	.0133	0	-.3385	.1912	-.0472	-.0365	.0223
1	-.4587	.1196	.0122	-.0487	.0131	1	-.2579	.1863	-.0535	-.0271	.0220
2	-.3684	.1159	.0111	-.0385	.0130	2	-.1814	.1814	-.0553	-.0183	.0219
3	-.2832	.1147	.0078	-.0280	.0131	3	-.1048	.1793	-.0588	-.0088	.0219
5	-.0977	.1122	.0044	-.0061	.0134	5	.0605	.1793	-.0651	.0108	.0223
7	.0952	.1122	.0011	-.0162	.0134	7	.2962	.1824	-.0758	.0378	.0236
10	.5389	.1578	-.0532	-.0673	.0194	10	.6589	.2190	-.1311	.0812	.0305
15	.7745	.2391	-.1198	-.1014	.0345	15	.9814	.3459	-.1935	.1216	.0487
$M = 0.85$											
-10	-1.0342	.3260	.0593	-.1255	.0364	-10	-.8081	.3437	-.0197	-.0942	.0397
-7	-1.0037	.2670	.0842	-.1187	.0292	-7	-.6921	.2767	-.0043	-.0801	.0319
-5	-.9238	.2278	.0759	-.1073	.0248	-5	-.6129	.2434	-.0128	-.0704	.0279
-3	-.8156	.1862	.0645	-.0936	.0202	-3	-.5162	.2139	-.0316	-.0582	.0247
-2	-.7545	.1699	.0582	-.0856	.0182	-2	-.4582	.2006	-.0342	-.0513	.0232
-1	-.6840	.1515	.0437	-.0768	.0166	-1	-.3963	.1930	-.0385	-.0435	.0225
0	-.5806	.1399	.0395	-.0647	.0155	0	-.3287	.1844	-.0445	-.0350	.0217
1	-.4889	.1317	-.0125	-.0532	.0148	1	-.2513	.1787	-.0505	-.0263	.0213
2	-.3996	.1272	.0354	-.0426	.0146	2	-.1798	.1768	-.0513	-.0175	.0213
3	-.3150	.1226	.0301	-.0319	.0141	3	-.1063	.1746	-.0573	-.0088	.0213
5	-.0870	.1179	.0021	-.0057	.0146	5	.0541	.1750	-.0599	.0106	.0216
7	.1340	.1226	-.0063	-.0198	.0149	7	.2900	.1797	-.0718	.0379	.0232
10	.5665	.2197	-.0551	-.0700	.0220	10	.6187	.2149	-.1240	.0766	.0294
15	.8297	.2532	-.1341	-.1057	.0220	15	.9377	.3385	-.1856	.1161	.0472
$M = 0.90$											
-10	-1.0022	.3514	.0734	-.1181	.0394	-10	-.7679	.3283	-.0206	-.0897	.0379
-7	-.9004	.2785	.0636	-.1060	.0314	-7	-.6694	.2706	-.0041	-.0773	.0310
-5	-.8252	.2351	.0538	-.0952	.0262	-5	-.5950	.2369	-.0148	-.0674	.0272
-3	-.7234	.1969	.0460	-.0845	.0218	-3	-.4946	.2076	-.0271	-.0554	.0238
-2	-.6637	.1806	.0392	-.0773	.0197	-2	-.4407	.1976	-.0288	-.0487	.0225
-1	-.5929	.1665	.0342	-.0680	.0185	-1	-.3775	.1884	-.0370	-.0406	.0216
0	-.5133	.1534	.0294	-.0580	.0175	0	-.3124	.1802	-.0411	-.0325	.0210
1	-.4314	.1458	.0225	-.0480	.0168	1	-.2417	.1747	-.0469	-.0247	.0206
2	-.3429	.1426	.0225	-.0376	.0163	2	-.1766	.1719	-.0493	-.0162	.0206
3	-.2500	.1404	.0147	-.0272	.0163	3	-.1078	-.0128	-.0535	-.0078	.0208
5	-.0730	.1316	.0049	-.0057	.0163	5	.0502	.1700	-.0584	.0111	.0209
7	.2057	.1447	-.0392	-.0272	.0177	7	.2789	.1747	-.0633	.0379	.0228
10	.6261	.1861	-.0900	-.0759	.0257	10	.5764	.2131	-.1127	.0731	.0288
15	.9624	.2970	-.1390	-.1196	.0437	15	.8869	.3319	-.1769	.1125	.0457
$M = 1.00$											
-10	-.8302	.3558	.0205	-.0972	.0395	-10	-.8081	.3437	-.0197	-.0942	.0397
-7	-.7154	.2884	-.0045	-.0828	.0331	-7	-.6921	.2767	-.0043	-.0801	.0319
-5	-.6267	.2537	-.0169	-.0724	.0289	-5	-.6129	.2434	-.0128	-.0704	.0279
-3	-.5340	.2220	-.0330	-.0603	.0255	-3	-.5162	.2139	-.0316	-.0582	.0247
-2	-.4736	.2091	-.0401	-.0531	.0242	-2	-.4582	.2006	-.0342	-.0513	.0232
-1	-.4131	.1992	-.0401	-.0450	.0230	-1	-.3963	.1930	-.0385	-.0435	.0225
0	-.3385	.1912	-.0472	-.0365	.0223	0	-.3287	.1844	-.0445	-.0350	.0217
1	-.2579	.1863	-.0535	-.0271	.0220	1	-.2513	.1787	-.0505	-.0263	.0213
2	-.1814	.1814	-.0553	-.0183	.0219	2	-.1798	.1768	-.0513	-.0175	.0213
3	-.1048	.1793	-.0588	-.0088	.0219	3	-.1063	.1746	-.0573	-.0088	.0213
5	.0605	.1793	-.0651	.0108	.0223	5	.0541	.1750	-.0599	.0106	.0216
7	.2962	.1824	-.0758	.0378	.0236	7	.2900	.1797	-.0718	.0379	.0232
10	.6589	.2190	-.1311	.0812	.0305	10	.6187	.2149	-.1240	.0766	.0294
15	.9814	.3459	-.1935	.1216	.0487	15	.9377	.3385	-.1856	.1161	.0472
$M = 1.05$											
-10	-.8081	.3437	-.0197	-.0942	.0395	-10	-.7679	.3283	-.0206	-.0897	.0379
-7	-.6921	.2767	-.0043	-.0801	.0319	-7	-.6694	.2706	-.0041	-.0773	.0310
-5	-.6129	.2434	-.0128	-.0704	.0279	-5	-.5950	.2369	-.0148	-.0674	.0272
-3	-.5162	.2139	-.0316	-.0582	.0247	-3	-.4946	.2076	-.0271	-.0554	.0238
-2	-.4582	.2006	-.0342	-.0513	.0232	-2	-.4407	.1976	-.0288	-.0487	.0225
-1	-.3963	.1930	-.0385	-.0435	.0225	-1	-.3775	.1884	-.0370	-.0406	.0216
0	-.3214	.1802	-.0411	-.0325	.0210	0	-.3124	.1802	-.0411	-.0325	.0210
1	-.2417	.1747	-.0469	-.0247	.0206	1	-.2417	.1747	-.0469	-.0247	.0206
2	-.1766	.1719	-.0493	-.0162	.0206	2	-.1766	.1719	-.0493	-.0162	.0206
3	-.1078	-.0128	-.0535	-.0078	.0208	3	-.1078	-.0128	-.0535	-.0078	.0208
5	.0502	.1700	-.0584	.0111	.0209	5	.0502	.1700	-.0584	.0111	.0209
7	.2789	.1747	-.0633	.0379	.0228	7	.2789	.1747	-.0633	.0379	.0228
10	.5764	.2131	-.1127	.0731	.0288	10	.5764	.2131	-.1127	.0731	.0288
15	.8869	.3319	-.1769	.1125	.0457	15	.8869	.3319	-.1769	.1125	.0457
$M = 1.10$											
-10	-.7679	.3283	-.0206	-.0897	.0379	-10	-.7679	.3283	-.0206	-.0897	.0379
-7	-.6694	.2706	-.0041	-.0773	.0310	-7	-.6694	.2706	-.0041	-.0773	.0310
-5	-.5950										

TABLE 6 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 6 MODEL *Continued

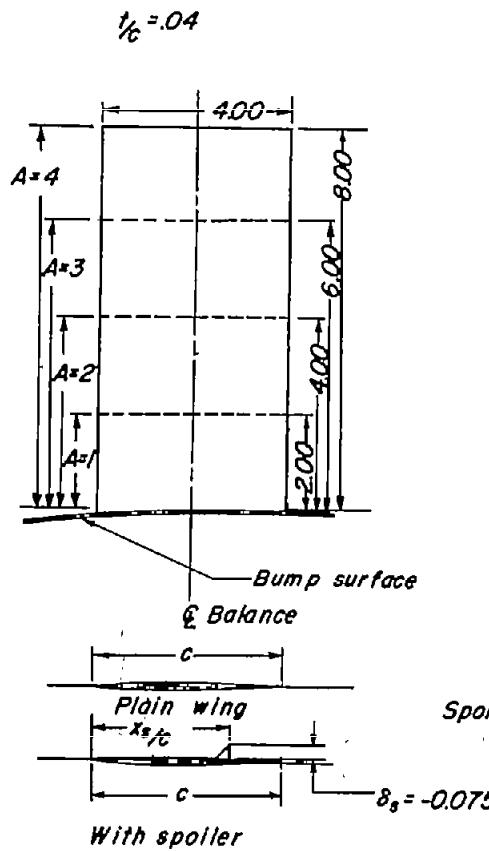
$$\frac{t}{c} = 0.06 \quad \frac{x_0}{c} = 0.80$$

α deg	c_L	c_D	c_H	c_l	c_n	c_L	c_D	c_H	c_l	c_n	
$M = 0.60$											
$M = 0.95$											
-10	-1.0874	.2997	.1540	-.1333	.0321	-10	-1.1151	.3932	.1722	-.1355	.0440
-7	-1.1062	.2258	.1165	-.1324	.0229	-7	-.9678	.3062	.1349	-.1185	.0343
-5	-.9670	.1712	.0724	-.1142	.0168	-5	-.8584	.2587	.1210	-.1062	.0287
-3	-.7525	.1407	.0582	-.0901	.0136	-3	-.7322	.2163	.1047	-.0906	.0238
-2	-.6697	.1296	.0607	-.0801	.0123	-2	-.6438	.1997	.0991	-.0810	.0222
-1	-.5945	.1119	.0599	-.0712	.0112	-1	-.5681	.1842	.0931	-.0715	.0204
0	-.5155	.1110	.0625	-.0612	.0104	0	-.4755	.1707	.0856	-.0606	.0189
1	-.4402	.1046	.0616	-.0530	.0096	1	-.3787	.1604	.0815	-.0507	.0179
2	-.3650	.1018	.0666	-.0444	.0093	2	-.2819	.1532	.0759	-.0388	.0171
3	-.2822	.1054	.0641	-.0350	.0090	3	-.1767	.1449	.0698	-.0269	.0163
5	-.0753	.0869	.0582	-.0116	.0089	5	.1136	.1335	.0419	-.0051	.0147
7	.1129	.0926	.0474	.0107	.0087	7	.4208	.1449	-.0256	.0412	.0186
10	.5268	.1462	-.0458	.0594	.0185	10	.7364	.2069	-.1024	.0793	.0284
15	.6961	.2406	-.0941	.0868	.0328	15	1.0856	.3569	-.1885	.1232	.0496
20	.7375	.3238	-.1248	.0928	.0436						
$M = 0.80$											
$M = 1.00$											
-10	-1.2285	.3366	.1553	-.1574	.0180	-10	-1.0684	.3817	.1694	-.1295	.0428
-7	-1.2034	.2651	.1608	-.1493	.0289	-7	-.9273	.2964	.1288	-.1125	.0336
-5	-1.1357	.2170	.1636	-.1383	.0233	-5	-.8265	.2499	.1159	-.1008	.0281
-3	-.9201	.1665	.1109	-.1128	.0175	-3	-.6934	.2082	.1026	-.0858	.0236
-2	-.7998	.1418	.0943	-.0990	.0152	-2	-.6249	.1933	.0923	-.0770	.0219
-1	-.7020	.1307	.0971	-.0872	.0139	-1	-.5362	.1784	.0914	-.0678	.0202
0	-.5967	.1196	.0998	-.0751	.0126	0	-.4435	.1685	.0861	-.0574	.0188
1	-.4914	.1109	.0982	-.0637	.0117	1	-.3628	.1586	.0781	-.0473	.0180
2	-.3861	.1048	.0971	-.0515	.0111	2	-.2621	.1497	.0749	-.0365	.0172
3	-.2833	.0987	.0361	-.0398	.0101	3	-.1411	.1427	.0691	-.0232	.0164
5	-.0376	.0888	.0832	-.0122	.0100	5	.1613	.1388	.0223	-.0114	.0156
7	.2231	.0987	.0665	.0170	.0112	7	.4032	.1507	-.0290	.0398	.0195
10	.6268	.1504	-.0166	.0649	.0197	10	.6934	.2062	-.1003	.0747	.0277
15	.7647	.2478	-.1170	.0925	.0350	15	1.0402	.3489	-.1815	.1174	.0492
20	.8148	.3366	-.1470	.0974	.0463						
$M = 0.85$											
$M = 1.05$											
-10	-1.2881	.3641	.2054	-.1563	.0392	-10	-1.0250	.3662	.1604	-.1236	.0415
-7	-1.1988	.2775	.1898	-.1438	.0304	-7	-.8935	.2854	.1283	-.1080	.0325
-5	-1.1048	.2312	.1846	-.1316	.0246	-5	-.7929	.2407	.1112	-.0964	.0274
-3	-.9543	.1792	.1622	-.1156	.0195	-3	-.6653	.2045	.1027	-.0820	.0229
-2	-.8603	.1595	.1544	-.1042	.0169	-2	-.5995	.1884	.0963	-.0739	.0214
-1	-.7428	.1422	.1477	-.0913	.0149	-1	-.5222	.1741	.0899	-.0648	.0201
0	-.6346	.1295	.1352	-.0784	.0137	0	-.4371	.1626	.0843	-.0551	.0187
1	-.5312	.1191	.1279	-.0666	.0128	1	-.3443	.1522	.0770	-.0448	.0175
2	-.4231	.1098	.1196	-.0540	.0117	2	-.2437	.1436	.0740	-.0335	.0166
3	-.3056	.1064	.1118	-.0407	.0109	3	-.1276	.1379	.0654	-.0210	.0162
5	-.0235	.0925	.0858	-.0095	.0102	5	.1663	.1379	.0162	-.0141	.0154
7	.2821	.1064	.0416	.0255	.0131	7	.3791	.1503	-.0265	.0385	.0195
10	.6911	.1630	-.0364	.0730	.0219	10	.6382	.1998	-.0899	.0692	.0264
15	.8227	.2543	-.1315	.0962	.0370	15	.9766	.3348	-.1763	.1114	.0457
20	.8603	.3468	-.1549	.1004	.0481						
25	.8791	.4635	-.1731	.0993	.0610						
$M = 0.90$											
$M = 1.10$											
-7	-1.0929	.2916	.1860	-.1317	.0319	-10	-.9855	.3493	.1481	-.1182	.0404
-5	-.9734	.239	.1605	-.1192	.0262	-7	-.8553	.2734	.1234	-.1038	.0313
-3	-.8318	.1937	.1444	-.1027	.0209	-5	-.7624	.2332	.1110	-.0927	.0264
-2	-.7522	.1741	.1395	-.0934	.0189	-3	-.6634	.1966	.0987	-.0785	.0223
-1	-.6637	.1611	.1297	-.0827	.0171	-2	-.5764	.1811	.0926	-.0707	.0208
0	-.5619	.1469	.1223	-.0709	.0160	-1	-.4946	.1692	.0905	-.0623	.0192
1	-.4602	.1338	.1199	-.0601	.0144	0	-.4202	.1573	.0823	-.0530	.0179
2	-.3540	.1251	.1126	-.0483	.0137	1	-.3273	.1463	.0740	-.0427	.0169
3	-.2434	.1175	.1052	-.0358	.0125	2	-.2268	.1381	.0720	-.0322	.0163
5	.0354	.1055	.0783	-.0050	.0113	3	-.1078	.1326	.0617	-.0184	.0154
7	.4071	.1229	-.0010	.0376	.0154	5	.1673	.1326	.0144	-.0141	.0153
10	.7212	.1883	-.0734	.0777	.0256	7	.3607	.1481	-.0259	.0370	.0190
15	1.0840	.3318	-.1580	.1228	.0305	10	.5987	.1966	-.0835	.0662	.0258
20	.9292	.3699	-.1835	.1081	.0509	15	.9297	.3247	-.1666	.1065	.0440
25	.9292	.4733	-.1894	.1074	.0540						

TABLE 6 -- THE AERODYNAMIC CHARACTERISTICS OF THE ASPECT RATIO 6 MODEL--Concluded.

$$\frac{x}{c} = 0.06 \quad \frac{x_s}{c} = 1.00$$

α , deg	c_L	c_D	c_H	c_I	c_n	α , deg	c_L	c_D	c_H	c_I	c_n
$M = 0.60$										$M = 0.95$	
-10	-1.2354	.3296	.3091	-.1654	.0337	-5	-1.0429	.2668	.3243	-.1254	.0276
-7	-1.2392	.2458	.2319	-.1605	.0239	-3	-.8921	.2121	.2918	-.1074	.0231
-5	-1.0931	.1842	.1987	-.1405	.0168	-2	-.8083	.1946	.2872	-.0979	.0206
-3	-.9284	.1527	.2037	-.1212	.0134	-1	-.7162	.1761	.2779	-.0878	.0188
-2	-.8461	.1426	.2054	-.1109	.0123	0	-.6073	.1606	.3150	-.0759	.0170
-1	-.7600	.1344	.2070	-.1012	.0116	1	-.4942	.1452	.2594	-.0637	.0156
0	-.6626	.1252	.2004	-.0909	.0104	2	-.3644	.1308	.2474	-.0535	.0138
1	-.5690	.1187	.2103	-.0800	.0093	3	-.2010	.1205	.2177	-.0325	.0127
2	-.4904	.1104	.1938	-.0709	.0090	5	.1382	.1143	.1205	.0064	.0125
3	-.4043	.1050	.1954	-.0606	.0083	7	.3979	.1246	.0371	.0073	.0162
5	-.1722	.0930	.1673	-.0333	.0075	10	.6952	.1915	-.0463	.0739	.0256
7	.0786	.0893	.1375	-.0048	.0080	15	1.0596	.3306	-.1529	.1203	.0471
10	.4867	.1454	-.0049	.0466	.0167						
15	.6701	.2385	-.0861	.0775	.0312						
20	.7525	.3186	-.1275	.0890	.0428						
25	.7600	.3968	-.1308	.0890	.0521						
$M = 0.80$										$M = 1.00$	
-7	-1.3720	.2895	.3244	-.1647	.0300	-5	-1.0025	.2524	.2706	-.1178	.0280
-5	-1.2523	.2306	.3057	-.1494	.0237	-3	-.8541	.2031	.2927	-.1016	.0233
-3	-1.0477	.1816	.2781	-.1239	.0177	-2	-.7739	.1805	.2838	-.0915	.0210
-2	-.9230	.1595	.2549	-.1122	.0157	-1	-.6737	.1627	.2750	-.0805	.0190
-1	-.8182	.1436	.2505	-.1009	.0145	0	-.5734	.1479	.2679	-.0688	.0171
0	-.7035	.1312	.2450	-.0884	.0133	1	-.4652	.1331	.2572	-.0574	.0155
1	-.5837	.1202	.2351	-.0747	.0121	2	-.3128	.1193	.2351	-.0402	.0138
2	-.4690	.1116	.1159	-.0626	.0109	3	-.1363	.1095	.1907	-.0217	.0134
3	.3393	.1030	.2152	-.0488	.0100	5	.1684	.1144	.1064	.0123	.0141
5	-.0549	.0883	.1810	-.0170	.0089	7	.3689	.1292	.0488	.0373	.0179
7	.2345	.0969	.1569	-.0161	.0100	10	.6496	.1825	-.0399	.0727	.0260
10	.6087	.1484	.0364	.0626	.0186	15	1.0105	.3185	-.1419	.1162	.0460
15	.7733	.2453	-.1004	.0932	.0338						
20	.8232	.3300	-.1490	.1029	.0449						
$M = 0.85$										$M = 1.05$	
-5	-1.1834	.2363	.3207	-.1419	.0245	-5	-1.1542	.2422	.3064	-.1127	.0276
-3	-1.0384	.1846	.2897	-.1219	.0190	-3	-.8195	.1902	.2851	-.0965	.0231
-2	-.9449	.1645	.2814	-.1113	.0170	-2	-.7387	.1759	.2877	-.0875	.0201
-1	-.8326	.1472	.2742	-.0988	.0145	-1	-.6463	.1571	.2723	-.0778	.0182
0	-.7157	.1336	.2742	-.0863	.0136	0	-.5463	.1400	.2723	-.0660	.0169
1	-.5987	.1214	.3156	-.0734	.0121	1	-.4155	.1248	.2468	-.0520	.0149
2	-.4818	.1098	.2587	-.0602	.0112	2	-.2424	.1135	.2043	-.0333	.0131
3	.3181	.1007	.2173	-.0428	.0100	3	-.0846	.1088	.1574	-.0140	.0130
5	-.0140	.0897	.1811	-.0098	.0096	5	.1731	.1145	.0936	.0146	.0142
7	.3087	.1070	.1035	.0276	.0118	7	.3732	.1287	.0400	.0380	.0176
10	.8794	.1530	.0093	.0700	.0203	10	.6040	.1778	-.0340	.0682	.0246
15	.8045	.2479	-.1190	.0988	.0355	15	.9618	.3132	-.1378	.1114	.0139
20	.8513	.3347	-.1604	.1022	.0471						
25	.8747	.4324	-.1655	.1041	.0589						
$M = 0.90$										$M = 1.10$	
-5	-1.1142	.2496	.3215	-.1325	.0265	-5	-.9250	.2329	.3004	-.1078	.0265
-3	-.9601	.2009	.2942	-.1147	.0215	-3	-.7807	.1874	.2783	-.0919	.0219
-2	-.8720	.1792	.2874	-.1051	.0191	-2	-.6993	.1692	.2701	-.0829	.0201
-1	-.7619	.1657	.2825	-.0926	.0179	-1	-.6068	.1511	.2537	-.0727	.0179
0	-.6518	.1511	.2728	-.0805	.0159	0	-.5106	.1347	.2545	-.0611	.0159
1	-.5417	.1370	.2552	-.0684	.0145	1	-.3774	.1192	.2308	-.0458	.0141
2	-.4140	.1245	.2533	-.0552	.0135	2	-.1924	.1101	.1842	-.0254	.0129
3	-.2774	.1089	.2328	-.0396	.0111	3	-.0629	.1055	.1473	-.0111	.0131
5	.0837	.0953	.1510	.0007	.0102	5	.1591	.1146	.0884	.0153	.0139
7	.4052	.1115	.0536	.0367	.0137	7	.3441	.1310	.0368	.0371	.0172
10	.7134	.1711	-.0390	.0773	.0319	10	.5809	.1783	.0900	.0659	.0240
15	1.0834	.9151	-.1364	.1211	.0452	15	.9176	.3057	-.1309	.1072	.0420



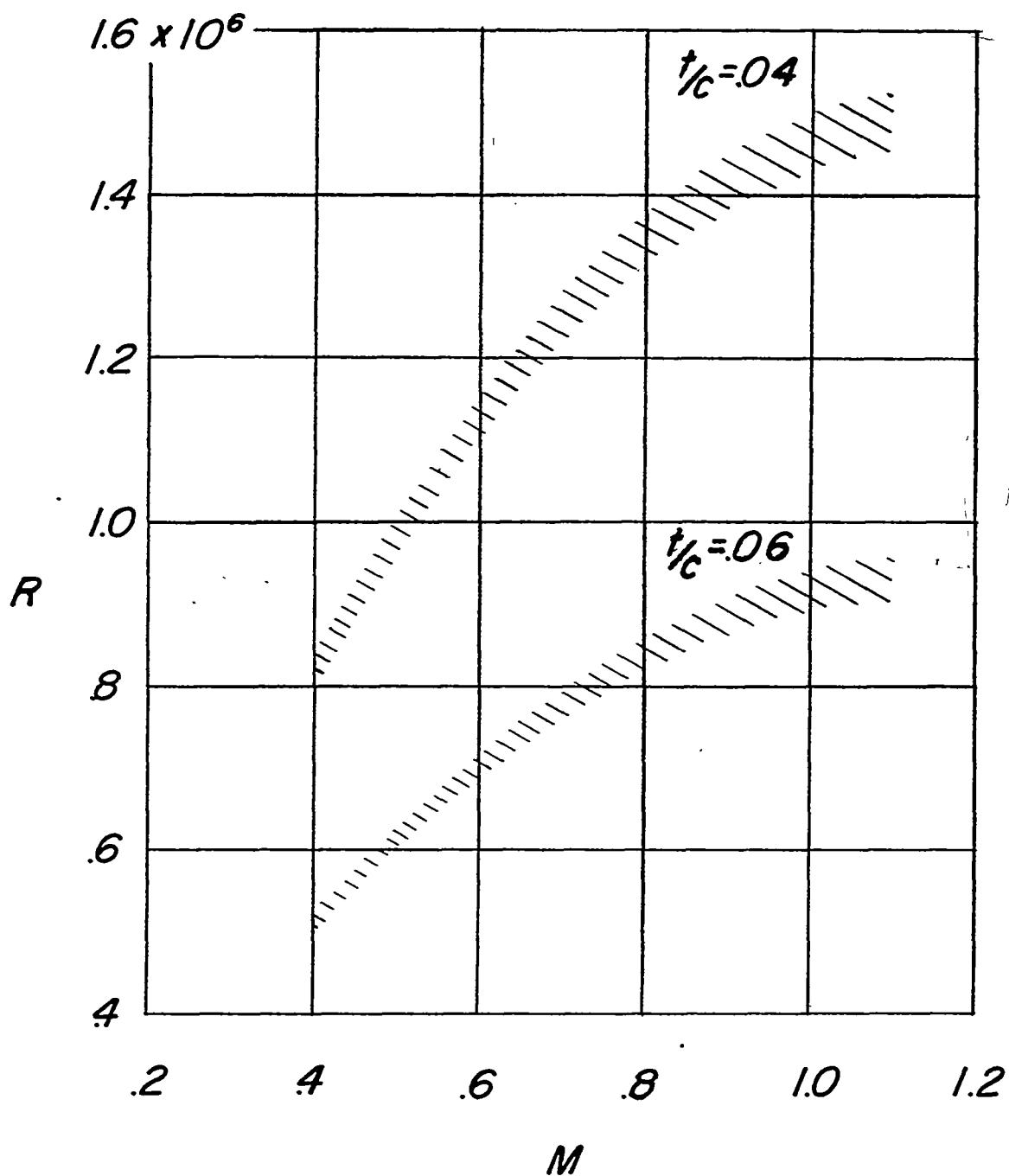
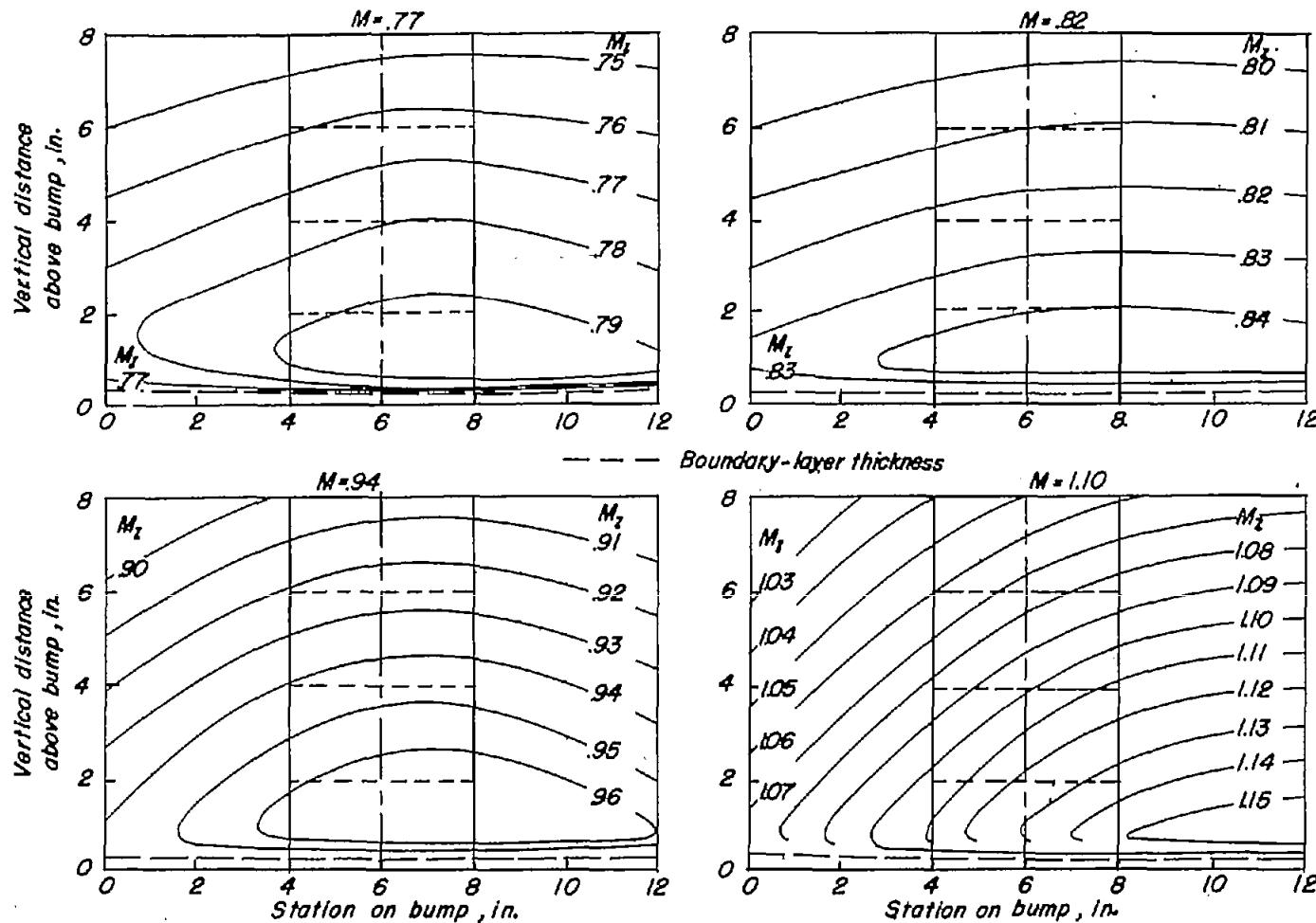
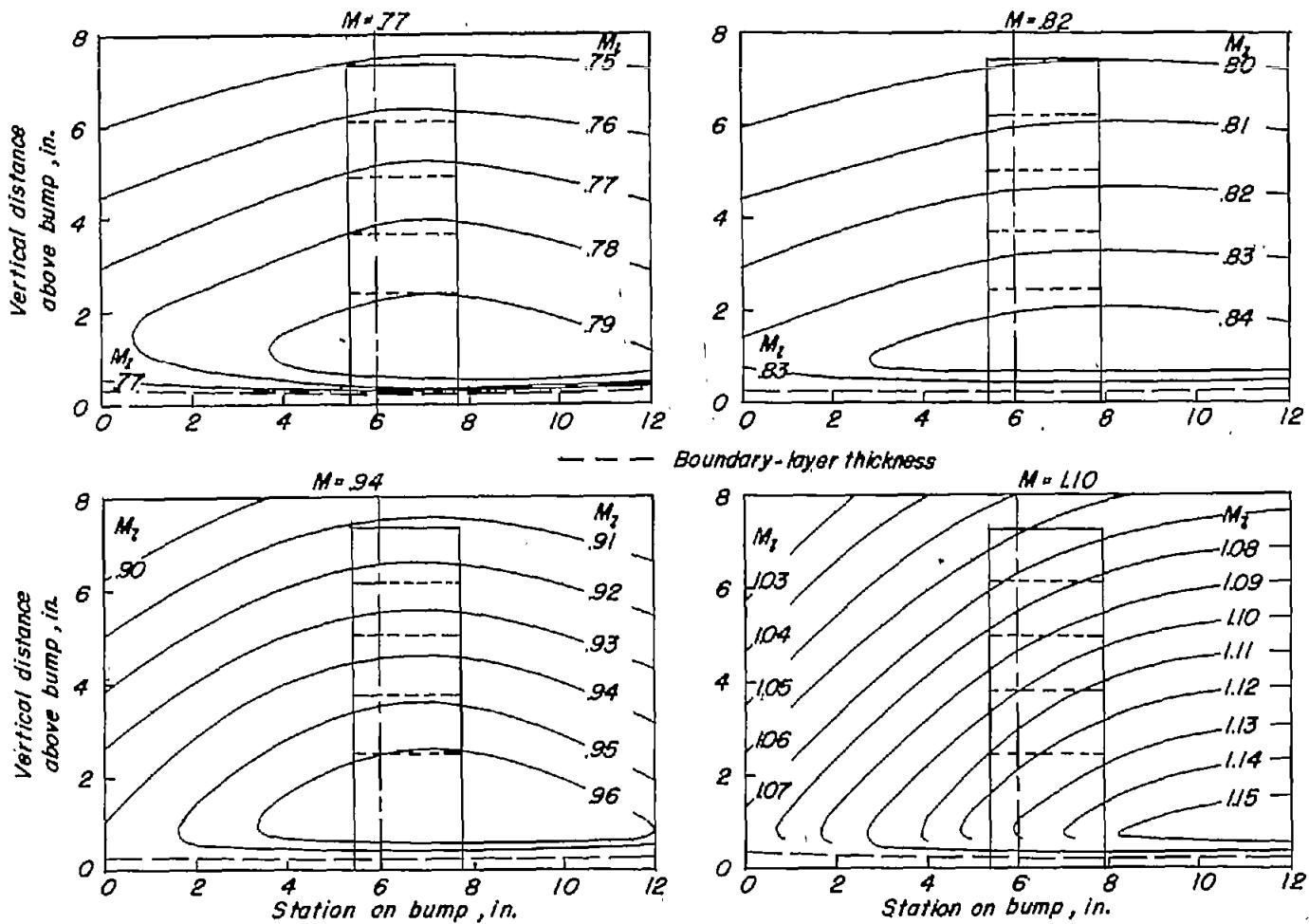


Figure 2-- Variation of test Reynolds number with Mach number.



(a) $t/c = 0.04$.

Figure 3.- Typical Mach number contours over transonic bump in region of model location.



(b) $t/c = 0.06$.

Figure 3.- Concluded.

*Reflection-plane correction
in terms of symmetric C_L*

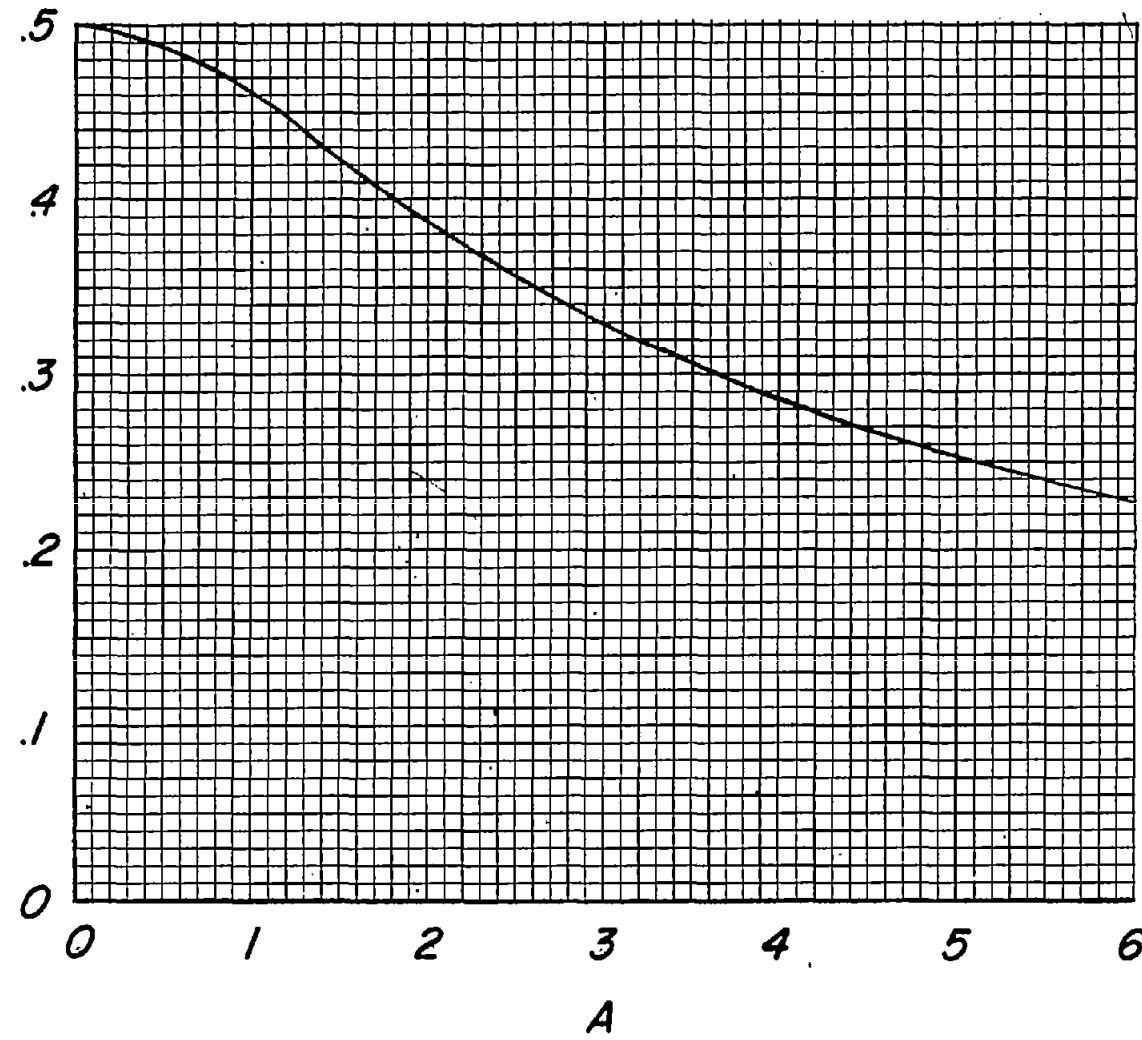


Figure 4.- Variation of reflection-plane correction with aspect ratio
for full-span controls on untapered, unswept wings.

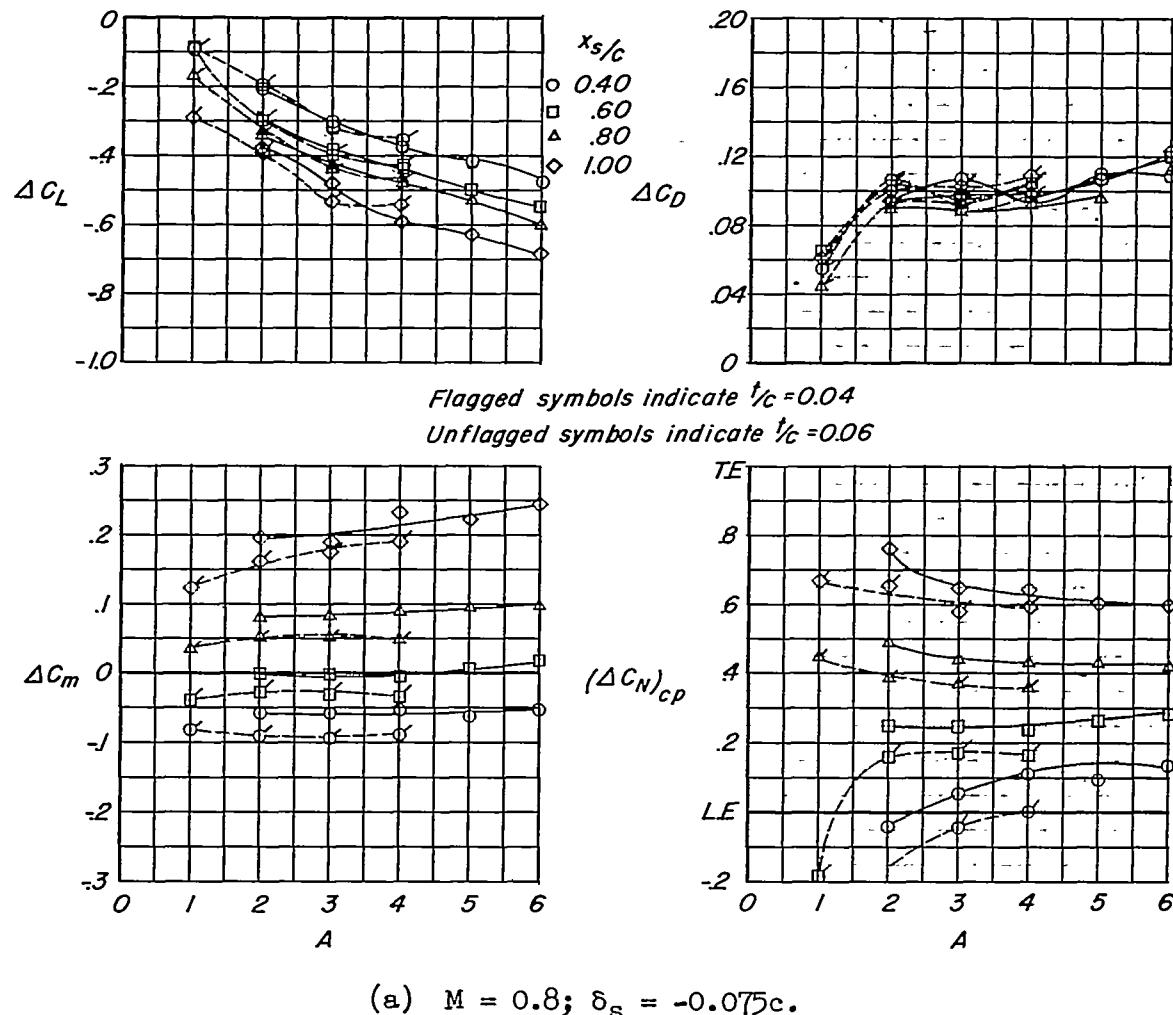
(a) $M = 0.8$; $\delta_s = -0.075c$.

Figure 5.- Variation of the incremental lift, drag, pitching moment, and lateral centers of pressure with aspect ratio at an angle of attack of 0° for plain spoilers projected at various chordwise positions.

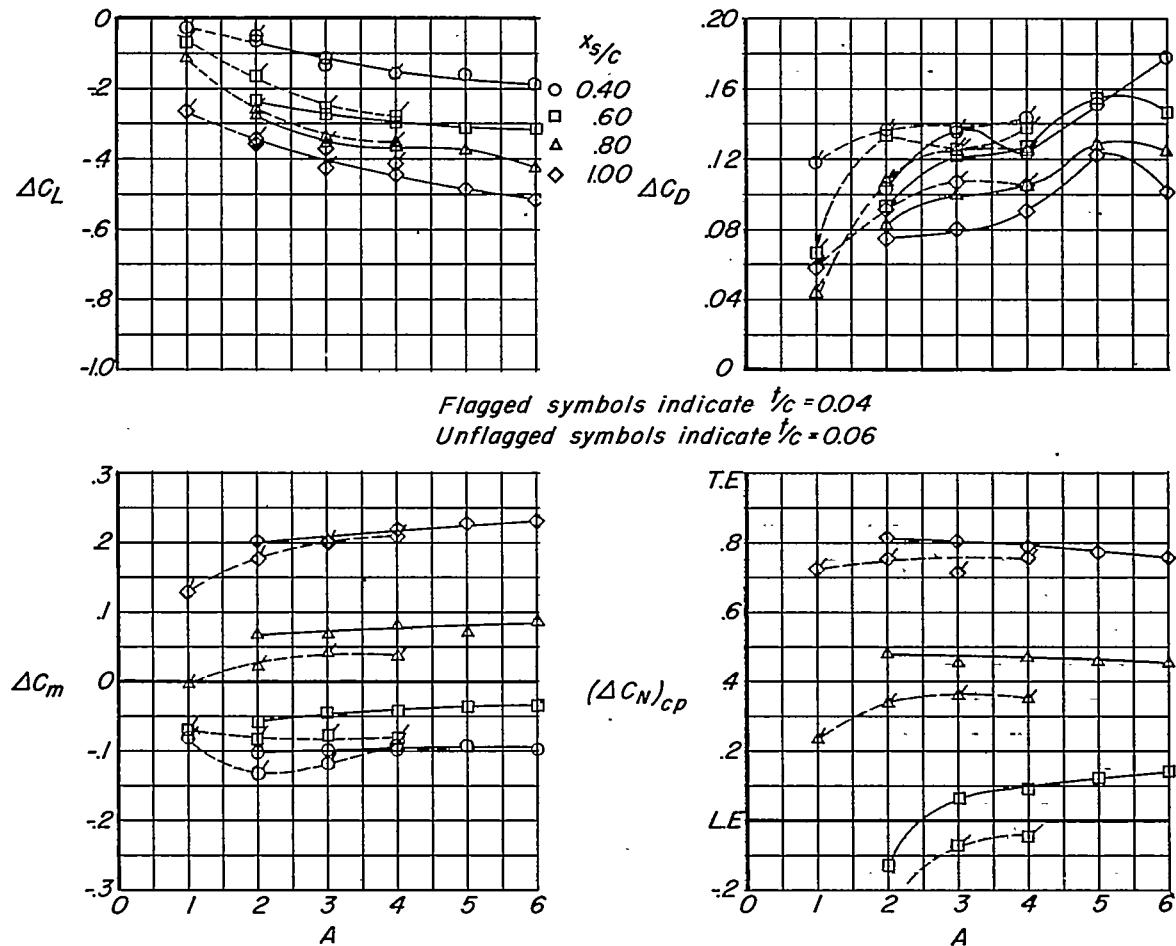
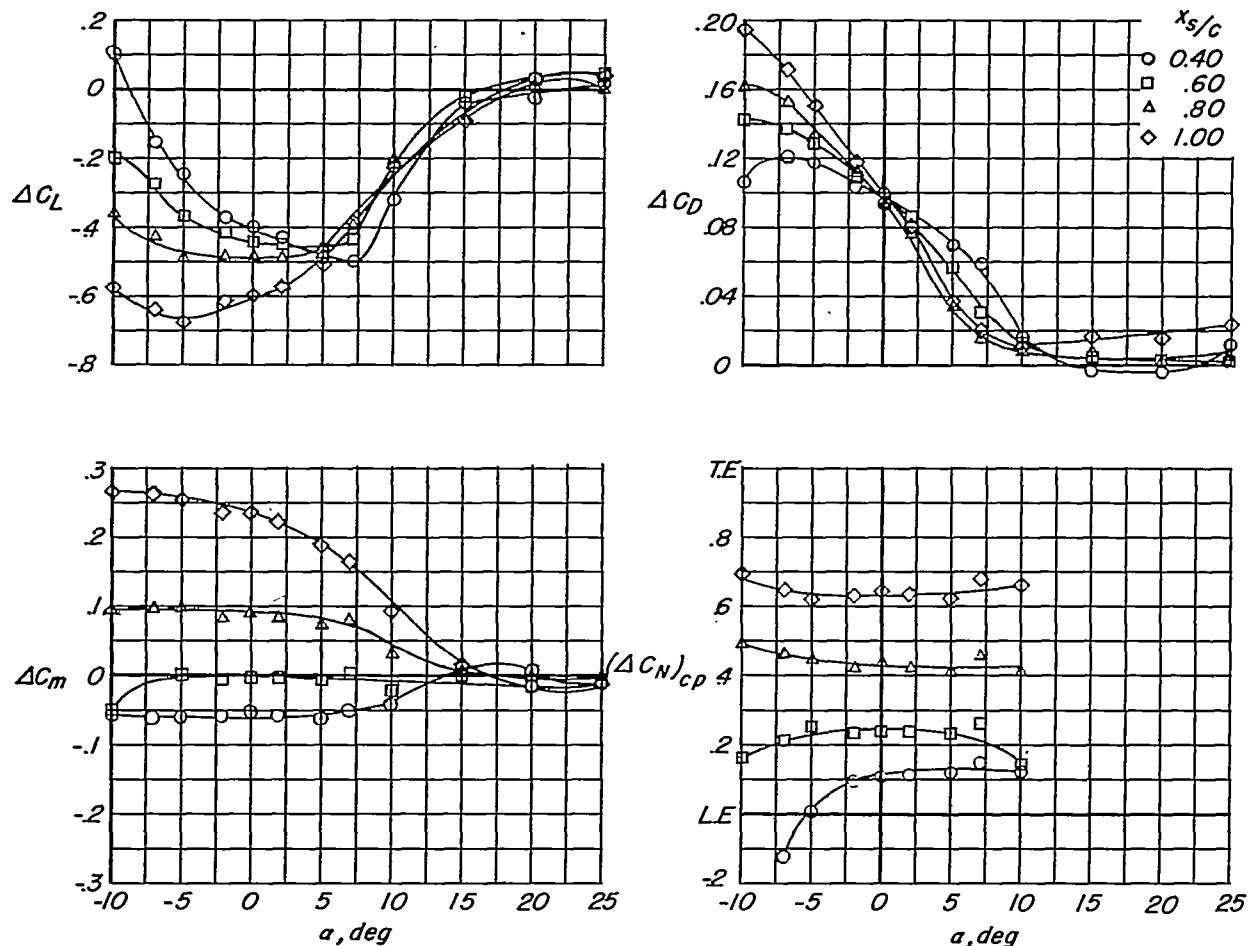
(b) $M = 1.1$; $\delta_s = -0.075c$.

Figure 5.- Concluded.



(a) $M = 0.8$; $\delta_s = -0.075c$.

Figure 6.- Variation of the incremental lift, drag, pitching moment, and lateral centers of pressure with angle of attack for the 6-percent-thick aspect-ratio-4 model with plain spoilers projected at various chordwise positions.

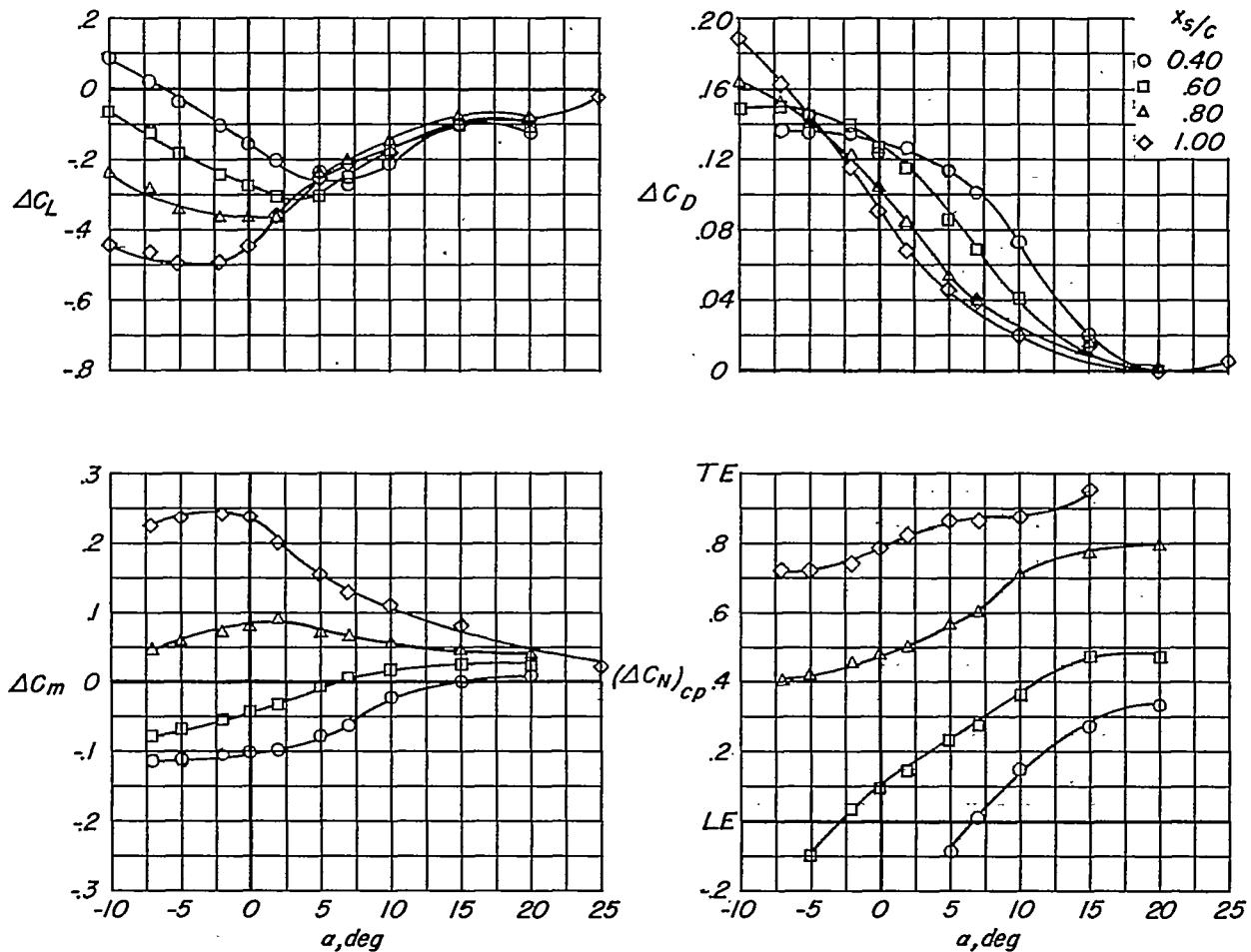
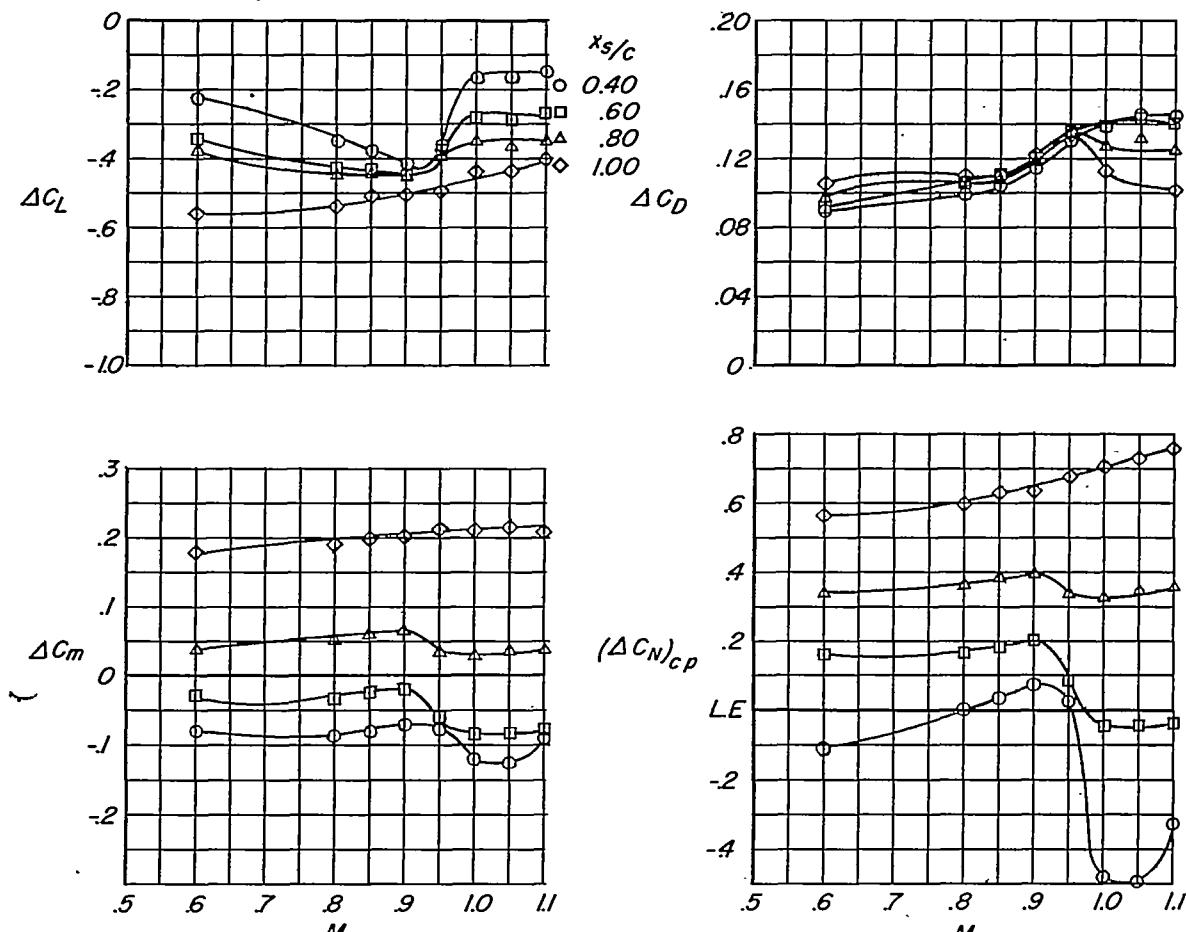
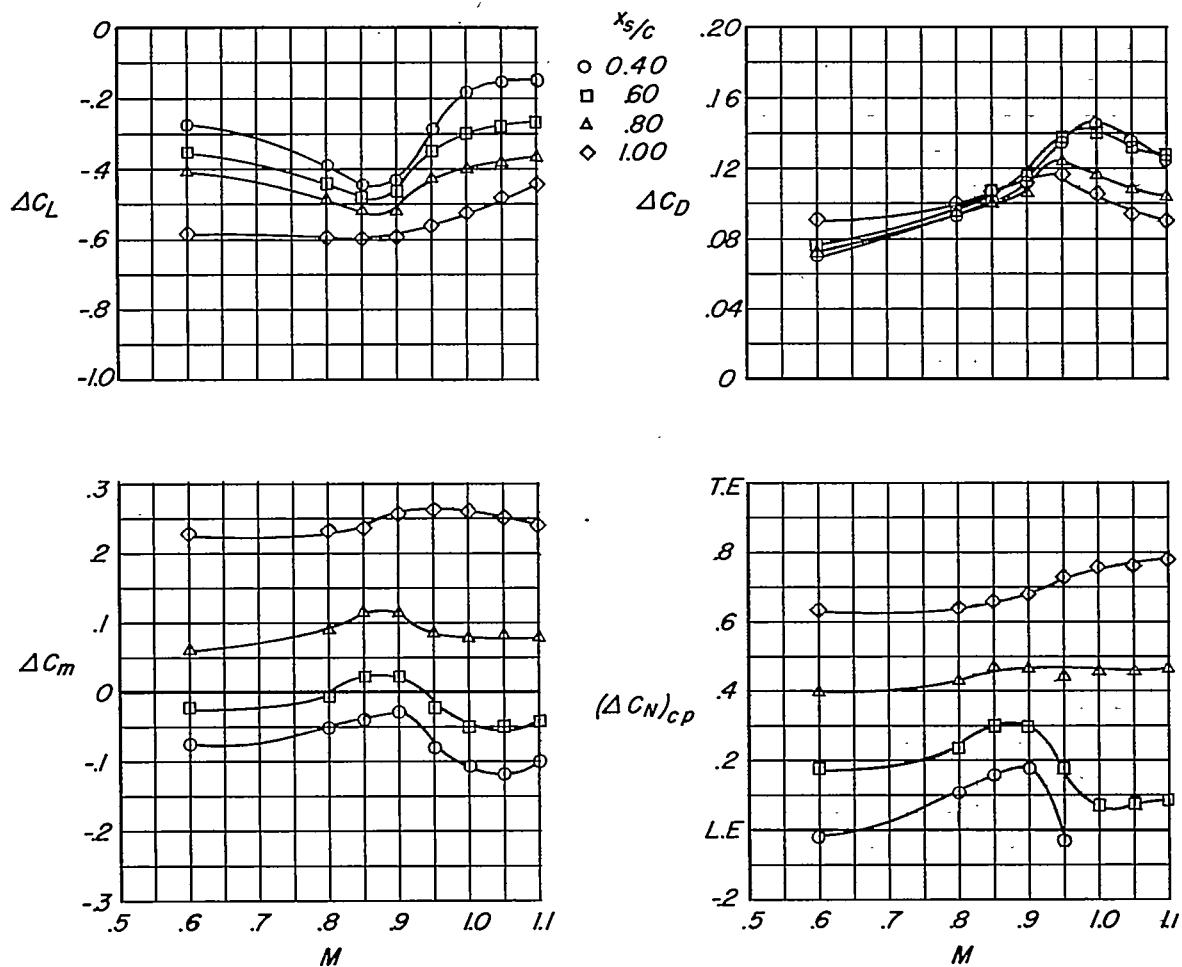
(b) $M = 1.1$; $\delta_s = -0.075c$.

Figure 6.- Concluded.



(a) $t/c = 0.04$; $\delta_s = -0.075c$.

Figure 7.- Variation of the incremental lift, drag, pitching moment, and lateral centers of pressure with Mach number at an angle of attack of 0° for plain spoilers at various chordwise positions on the aspect-ratio-4 model.



(b) $t/c = 0.06$; $\delta_s = -0.075c$.

Figure 7.- Concluded.